

CU AMIGA

97%

“The ultimate in space adventure, Frontier is the single most important step forward for games this decade.”

PC ZONE

95%

“Unrivalled classic, nothing comes close.”

AMIGA ACTION

93%

“Frontier is probably the best game I have ever played. This offers everything you could want in a game of this type.”

 KONAMI



PC Screen shot



AMIGA

DA
BRA
PRES

FRONTIER

E L
I

THE ONE

96%

only the very best

Available on PC,

© David Braben 1993. Licensed



Amiga Screen shot



PC Screen shot

DAVID
ABEN
SENTS

FRONTIER

II

“Like Elite before it, Frontier is a game that rises above its feeble competitors like a colossus and will be talked about in awe for years to come. It's better than you could ever have dreamed it to be.”

It matures with time

Available on PC, Amiga, Atari ST

Developed by Konami. Distributed by Gametek

C & VG

96%

“One of, if not the, biggest games ever, Frontier is a title that will make the rest of your software collection obsolete.”

AMIGA FORMAT

90%

“Frontier sucks you in and keeps you hostage. It's a monster.”

PC REVIEW

9/10

“The best space game ever.”

GAMETEK



PC1202-8

Power Computing and DKB have joined forces to produce the ultimate A1200 32-bit memory expansion. The PC1202-8 uses the latest industry standard 32-bit Simm technology which allows you to use 2MB, 4MB and 8MB modules. Simply by adding either a PC1202-8 to your Amiga 1200 will increase its processing speed by 219%, comes with real-time battery backed clock and optional FPU available.

Base

PC1202-8£79.95
PC1202-8 + 68882 20MHz£99.95

With 2MB

PC1202-8 + 688832 no FPU.....£159.95
PC1202-8 + 68882 20MHz£179.95
PC1202-8 + 68882 33MHz£199.95
PC1202-8 + 68882 40MHz£225.95

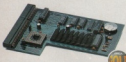
Trade in your 2MB Simm to upgrade to 4MB or 8MB, telephone for details.

With 4MB

PC1202-8 + 688832 no FPU.....£239.95
PC1202-8 + 68882 20MHz£259.95
PC1202-8 + 68882 33MHz£275.95
PC1202-8 + 68882 40MHz£299.95

There is no need to throw away the board if you want to upgrade from 4MB to 8MB. In simple, just buy an extra 4MB Simm.

Extra 4MB Simm£159.95



PC1204

The original PC1204 4MB 32-bit memory expansion is still available, and is exceptional value.

PC1204 + 68882 50MHz£319.95

Home Music Kit

Midl Interface£15.95
Home Music Kit.....£29.95



MegaChip Ram

Increase your Amiga 500/2000 chip RAM to a total of 2MB. MegaChip does this by using its own 1MB of RAM and drawing extra memory from any other RAM you have installed in your Amiga. No soldering is required.

MegaChip RAM£159



A500 Memory

A 4-chip 512K RAM expansion with a battery backed clock. Free software included. (A500+ compatible)

A500 Card with clock£29

A500 8MB

Expand your Amiga 500 from 2MB to 8MB of RAM. Plugs into the side slot, full auto-config, and through port.

2MB Board£139
4MB Board£219
8MB Board£299

Memory Expansions

We manufacture a vast range of memory cards for the Amiga 500, 500+, 600, 1200, 1500, 2000, 3000 and 4000. Please telephone us for prices and availability.

DKB 3128

Up to 128MB of RAM on your Amiga 3000/400 using 4,8,16 and 32MB Simm modules. This is a true Zorro III 32-bit memory board.

DKB 3128 0MB RAM£POA

Octogen SCSI-2

SCSI-2 board for the Amiga 2000 including memory expansion capabilities of up to 8MB.

Octogen SCSI-2£129



DKB 4091

The DKB 4091 (licensed by Commodore) SCSI Host Adaptor is a high performance board that connects up to seven SCSI devices to your Amiga. The DKB 4091 features: Full Zorro III implementation, fast SCSI-2 implementation, SCSI internal connector and ribbon cable, high density SCSI-2 external connector, direct memory access (DMA) and hardware to install a 3.5" hard drive on the board.

DKB 4091£399.95



Video Backup

Use a VCR as a backup storage device. Two hundred Amiga floppy disks fit on a 4 1/2" tape which can be used for an alternative hard disk backup system. What's more you can now watch television on your 1084s monitor. A Scart or Phono version is available.

Video Backup Scart£65
Video Backup Phono£60

GVP Products

Power Computing are now one of the official distributors of GVP 'High end professional' hardware and software.

Image FX- Colour image processing £100
EGS Spectrum 24-bit card (2MB).....£389
G-Lock (PAL video genlock).....£299
HC8+ SCSI controller.....£129

Hard disk available from 52MB to 1GB

Co-processors

All maths co-processors include crystals.

20MHz.....£40
33MHz.....£69
40MHz.....£89
50MHz (PGA).....£154



Epson Scanners

The GT-6500 and GT-8000 24-bit colour flatbed scanners from Epson scan up to A4 in size, with output resolutions of up to 1200DPI on the GT-6500 and 1600DPI on the GT-8000 in colour or greyscale. The scanners include PowerScan or Image FX image software. (Image FX+ PowerScan £300, only when you purchase a flatbed scanner)

Epson GT-6500 PowerScan£659
Epson GT-6500 Image FX£759
Epson GT-8000 PowerScan£1099
Epson GT-8000 Image FX£1199
Document Feeder£399



PowerScan 4

Completely re-designed powerful user interface, produce 256 greyscale images (on a AGA machine), scan in 64 greyscales (on AGA machine), can in display 16), add colour to greyscale images, special effects, new support for 18-bit scanner, add text to scans, available with mono or colour scanner. A1200/600 version available soon.

PowerScan 4 (Mono)£119
PowerScan 4 (Colour).....£239
PowerScan 4 inc. OCR£159
PowerScan 4 upgrade interface£50
PowerScan 4 upgrade software.....£20
OCR Junior Software£49
OCR Full version upgrade£49
(OCR full version only available to registered users of OCR Junior)

PowerScan IBM

For those who own an Amiga and IBM PC XT/AT it is now possible to use your PowerScan for both computers. The scanner includes 256 greyscales, 100-400 DPI resolution, scan kit for Windows, OCR software and merge function for the quick and easy joining of two partial images.

IBM interface & software£95.95

Disk Expander

Disk Expander is an innovative program for all Amiga users. With this software solution you may double the capacity of your floppy disk or hard disk drives. The installation process takes only a few seconds and afterwards Disk Expander works invisibly in the background. The compression ratios vary from 30% to 70%. The easy to use graphical interface guarantees that even the inexperienced user is able to use Disk Expander immediately without any problems. Disk Expander does not only expand the capacity of your hard disk drive, even floppy disks now have a storage space of approximately 1.5 megabytes. (Works with all drives including, SCSI, IDE, Floppies and even the RAD disk).

Disk Expander£35



Fargo Primera Printer

Now you can produce stunning, high quality output on paper, transparency film or even T-Shirt transfer from your Amiga. The Primera colour printer, recent recipient of countless awards in the IBM-PC and Macintosh markets is also the perfect companion to any Amiga. Primera uses wax thermal transfer technology, a technology usually associated with much higher priced printers. Some of the features include, software drivers for Amiga, PC and Macintosh, optional photo-realistic upgrade kit (dye sublimation) and monochrome ribbon cartridges available for text printing only.

Primera printer.....£825
Photo realistic upgrade kit.....£215.95
Photo realistic refill kit (100 prints).....£250
Photo realistic refill kit (25 prints).....£79.95
4 colour ribbon (80 prints).....£38.95
3 colour ribbon (115 prints).....£38.95
Monochrome ribbon (600 prints).....£31.95
Primera printer (A4 200 sheets).....£18
T-Shirt transfer paper (A4 10 sheets).....£17.95

XL Drive

The XL Drive can be used with any Amiga Computer, and allows you to store a massive 1.76MB on a high density floppy diskette. The drive can also act as a standard 880K drive and can read and write disks written on an A4000 internal high density drive. XL Drive requires Kickstart 2 or above.

XL Drive external.....£89.95
XL Drive internal (all Amiga's).....£79.95
XL Drive internal A4000.....£89.95

PC880B Drive

The new updated PC880B is the most impressive disk drive of its kind on the market. The drive includes a strong aluminium casing, an anti-disk device, virus blocker, Cyclone compatible chip and the latest built-in backup hardware which allows X-Copy to copy and verify. What's more you can now control these features through your mouse, so there are no more annoying switches to use.

PC880B with Blitz Amiga.....£70
PC880B with Blitz & X-Copy.....£80
PC880B 1.76MB Upgrade.....£49.95

Features	PC880B	Amink
Anti-click	•	•
Anti-virus	•	•
Aluminium extrusion	•	•
Sony mechanism	•	•
Isolation switch	•	•
Thru'port	•	•
Upgradable to 1.76MB	•	•
Cyclone compatible chip	•	•
Built-in backup hardware	•	•
Mouse operated	•	•

PC880E Drive

This drive is a high quality external floppy drive at a fraction of the price. As with all of our drives the PC880E has a thru'port, disabling switch and 12 month guarantee

PC880E Economy Drive.....£49.95

Internal Drives

We use the same drive mechanisms as Commodore so that you get the kind of reassurance at a cheaper price than other internal drives on the market.

PC881 A500 Internal drive.....£40
PC882 A2000 Internal drive.....£40

SCSI/IDE Drives

We can supply SCSI or IDE 3.5"/2.5" hard drives in many different sizes. Including cables and installation software.

80MB IDE 2.5" Internal.....£179
120MB IDE 2.5" Internal.....£229
170MB IDE 2.5" Internal.....£270
52QMB SCSI/IDE.....£169
80MB SCSI/IDE.....£179
160MB SCSI/IDE.....£249
200MB SCSI/IDE.....£349

Floptical Drive

The Floptical stores 20MB of data on a removable 3.5" disk. (A SCSI interface is required)

Floptical A2000 Kit.....£289
Floptical A500 Kit.....£389
20MB Floptical Diskette.....£25

Syquest Drives

The new 3.5" removable hard disk from Syquest stores 105MB on each cartridge, with an accessing time of 17ms. An internal and external version is available. (A SCSI controller is required)

3.5" IDE Internal.....£499
3.5" IDE External.....£579
3.5" SCSI External.....£539
3.5" SCSI External.....£599
3.5" 105MB Cartridge.....£79

Power Optical

128MB Optical Internal.....£779
128MB Optical External.....£879
128MB Optical Disk.....£40
SCSI Controller A2000.....£129

Dual Drive

Our Dual Drive is packed with the many features of the PC880B whilst having two drives using only one port. This is another original from Power.

Dual Drive.....£125

X-Backup Pro

X-Backup Pro Hardware designed by us £29.95

Order Form

Name _____
Address _____

Telephone No. _____
System Owned _____
Description _____

I enclose a cheque/PO for £ _____
Credit Card No. _____
Expiry Date _____
Signature _____

Delivery next day £5.00 2-3 days £2.50 Saturday £10.00 deliveries are subject to stock availability.
Please make cheques payable to Power Computing Ltd



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FAX 0234 352207

AMIGA CONTENTS



31 MULTIMEDIA

It's that word again! Everyone's talking about it, but just what is Multimedia? Get stuck into our complete guide to this rapidly expanding new area in which the Amiga is the machine to use. We tell you what it can do for you, and how to get yourself set up with a throbbing new multimedia system to blow the competition out of the water. On top of that we've got a comprehensive buyers' guide to all the relevant hardware and software.

OFF THE CUFF EDITORIAL



Here I am, your jet-lagged culture-shocked comrade for the next 172 pages. Just back from New Zealand, I expected to find the magazine in an understated crisis without me, but was surprised to find a

killer issue of CU AMIGA all ready and waiting to go off to the printers. Just take a glance around the page and you'll see what I mean. What a team!

If you haven't figured out why we've got Alice in Wonderland on the cover, it's all to do with our massive multimedia feature.

Multimedia - Alice in Wonderland... get it? No neither do I really, but it makes a better cover than a picture of an Amiga, right? There's good news on the CD32 front this month. David Plassance announces in our exclusive Commodore Writers column, that CD32 software sales are now surging ahead of those of Sega's Mega CD, and we've got details of a new wave of stunning, original games that could be the CD32's ticket to the big time. Here's hoping...

K240 is our game coverdisk this month, and it's a right stormer, quite possibly the best game of its kind to appear in years. In fact, I believe it's a major contribution to road safety (why go crash a car when you could be at home playing K240?). Then there's our extra special "tech disk", which as usual houses a full-featured commercial software package - this month it's the acclaimed *Softwood File II* SG database, just the thing for putting a bit of order into your life. For AMOS programmers, we've also got the amazing extension system *Craft*, which is to AMOS what a nitro-injector is to a Beetle.

As if that wasn't enough, we've also squeezed on part two of our exclusive *Weird Science* series, a wonderful program that does your science homework for you (well, almost). Of course, that's not to mention the usual skippod of reviews, previews and regular step-by-step tutorials that you can rely on to help you get the most out of your Amiga. Tempting as it is to wish you a Happy New Year in the third consecutive editorial intro, I think it's wearing a bit thin now, so I'll just shuffle off and let you enjoy the mag. See ya.

Tony Horgan,
Assistant Technical Editor.

NEXT ISSUE ON SALE 19 MARCH

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GET SERIOUS

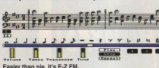
PRODUCTIVITY REVIEWS PRODUCTIVITY REVIEW

Full Motion Video finally makes an appearance on the CD32 with Commodore's new FMV add-on card. We also test realtime video digitisers head to head, and drop the verdict on TV Paint 2.

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Build your own diner with 3D Objects.



Easier than pie, it's E-Z FM.

SCREEN SCENE

GAME REVIEWS GAME REVIEWS GAME REVIEWS

Are you ready for K240? Probably the best game this side of Cricklewood, it kicks off our tangy selection of delicately spiced game reviews, including the crispy *Winter Olympics* and soft-centred *S.U.B.*, with a side-servicing of previews including an exclusive look at the deep-fried *Sim City 2000*. Tuck in!

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'Wow', says Simon, 'It's the first part of a complete tutorial for Adventuresoft's incredible adventure!'



It's slipper than Slippery The Slippery Slug in slippy slipper: It's US Gold's official Winter Olympics license!

REGULARS

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- 134 PD SCENE The latest amazing techno-video demos from Spacedolls is here, along with some spook-on games and the best disk mags around.
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COVERDISKS

A superb professional quality database is yours this month in *Softwood File II SG*. There's also an exclusive playable demo of *K240*, and the AMOS extension that everyone's raving about, *Craft*.

DISK 76

PAGE 16

Heading this month's special disk is the excellent *Softwood File II SG* database. Whether you want to simply convert your phone book to your computer, or if you need a powerful filing tool for your business, this is what you need. Combining fast and efficient data management

with a very friendly user-interface, *Softwood File* makes other databases look positively archaic. Not content with giving you a top full-price application, we've also found room on the disk for *Craft*, an essential add-on for all serious AMOS programmers. Now you can include blindingly fast fractal generator routines in your AMOS creations. Plus we've crammed in *Weird Science!*



DISK 77

PAGE 24

It's the game everyone has been waiting for, and as always CUJ AMIGA is first with the news. *Grenlin's* sequel to *Utopia* is just about ready for release, so to whet your appetite, we proudly present our exclusive playable demo of one of the biggest releases of 1994 - *K240*. You are based on an asteroid in one of the deeper areas of space, mining for rare ores. Unfortunately, so is a vile enemy alien, who not only wants the minerals, but also wants control of the sector. You're not really going to sit back passively and let them take over are you? Of course not. Colony control, mine administration, city planning, intersector exploration and more space combat than you ever thought possible. What are you waiting for!



COMPETITION CORNER
WIN LOADS OF GREAT STUFF IN OUR FAB COMPETITIONS - THEY'RE GREAT!
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172 CALIGARI

SNIGGER SNIGGER?

What's so bloody funny? The game is called SkidMarks, what's wrong with you poms? Not only has every Amiga magazine devoted columns of childish schoolboy humour when reviewing the game, they seem to have missed the point. The point is that SkidMarks is a communications revolution just waiting to happen!

With a 2400 baud modem, registered SkidMarks racers will be able to compete in our national championship. Over the next few months we are fine tuning the comms code and polishing another 12 competition tracks to kick the championships off this June.

And if you haven't already got yourself a copy of the racingest, chasingest, car game of the decade then get your pedal to the metal and race down to your software shop now!



"A milestone in Amiga games. One of the most playable racers ever... If future BlitzBASIC games are as good as this one, we are going to see the Amiga and CD-32 become the games machine of the decade... SkidMarks is for Car Racing what Kick Off was to Football."
CU AMIGA SCREENSTAR (92%)

"An immensely satisfying experience akin to peeling those stringy white bits off tangerines... SkidMarks is without doubt the best racing game I have ever played outside of an arcade."
AMIGA ACTION ACCOLADE (90%)

"A no nonsense, adrenalin-pumping racer. SkidMarks is beautifully simple to play. Like SensiSoccer, this is a timeless two-player game which is likely to be dragged out of your collection time and time again."
THE ONE (88%)

"It brings out those primal competitive urges, better than running around in woods naked and banging on big drums. It's packaged playability, it's canned competition. It is great!"
FORMAT GOLD (90%)



Acid Software
PO Box 3172
Hampstead
London NW1 9XA
ph 071 482 4066



BLITZ NEWS

New AGA support is now available for Blitz2. All the enhanced display capabilities of the AGA chipset have been made available to Blitz2 programmers including 24 bit colour control, 256 colour screens, super hires horizontal scrolling, 64 pixel wide sprites and more.

New GadTools support offers the applications programmer access to 12 new gadget types including sliders, scrollers, listviews and palette gadgets. New ASL support allows the opening of Screen, Font and File Requesters in single commands.

Currently under development for release in subsequent BUM issues (Blitz User Magazines) are:

- Developers-Pack for creating Blitz2 user extensions
- GadTools design utility
- CD32 specific command library
- Highspeed animation language
- Rerelease of Blitz2 3D
- 68020 optimized libraries

If you're programming the Amiga and haven't taken a serious look at the fastest growing language in the industry then do so now!



CU NEWS

FAST IV24 FOR A4000



This colourful picture is just one example of what the IV24 system can do.

GVP's popular IV24 24-bit graphics system is about to reappear in an updated form to cater for the A4000. Designed to take advantage of the A4000's faster video bus, the IV24-A4000 will run twice as fast as the previous versions when installed on an A4000.

The IV24-A4000 software set has also been reworked to provide a complete, consistent user interface for all application aspects of the IV24. The previous software offerings have been replaced with a bundled version of the image processing package Image FXV1.5 that full supports the IV24 for frame grabbing, video processing, painting, and rendering out to tape. The IV24-A4000 is scheduled for release in early February.

GVP have also just announced the imminent release of a customised version of Image FX 1.5 designed to run specifically on the EGS-28/24 Spectrum graphics board. This is available to all registered owners of EGS-28/24 Spectrum directly from GVP for \$19.95.

For further information, contact Silica on 081 309 1111, or GVP USA on (0101) 610 337 8770.

AURAL ILLUSION 1.1

The latest revision of Aural Illusion, the 16-bit sample editor, has just been released. Featuring 20 variable effects, such as reverb, echo, delay, bounce, flange, chorus, phase shift, distort, resonant, feedback, detune, enhance and filter, it could be the most advanced sample editor yet seen. On top of the effects, there's a range of 30 other manipulations available, offering modulation, AND, OR and XOR operations, thickens, filters and more distortions.

A sample synthesizer gives you the chance to create your own sounds from sections of samples, which can then be comforted with wave morphing and mixing, along with the envelope generator. File formats supported are IFF, AIFF, AVR, RAW 8 and 16-bit. Aural Illusion is available from Blackford Technology, Glendowie House, 77 Southwell Road, Bangor, Co Down, Northern Ireland, BT29 3AE, priced at £40 inclusive, tel: 0247 460613.

EXCALIBUR ACCELERATOR

Claiming speed increases up to 530% over a standard A4000/040, the Excalibur due soon from RCS is the 'fastest accelerator available', according to RCS. In its basic form, the E850-VAT unit promises a 400% speed gain, while the 33MHz model selling for £1150+VAT is responsible for the bold 530% increase claims. Contact RCS on 0203 473333.

APOLOGY CORNER

We incorrectly stated last issue in VFM that Railroad Tycoon, Silent Service 2 and Ashes from Action 16 were all £12.99. The correct price is, of course £19.99.

SUGAR FREE MAX!

It's a well known fact that many computer games players are big fans of the comic genre, so it comes as some surprise that it has taken this long for the two to really mix - if you forget things like the Sonic Comic and the Melbourne House game Redhawk. Max Overload is a new publication from Dark Horse International, the company responsible for Aliens, Star Wars, Predator and Robocop comics among others. The London-based firm have signed up the rights to Lemmings, ToeJam & Earl and Core Design's



Above: Chuck and his friends.

Chuck Rock for their first issue, which should just have appeared on the shelves as you read this.

Max Overload promises 'cutting edge comedy and a host of lively games-related features', is a mammoth 64 full-colour pages tome and costs just £1.95. For more information, call Bastion Marketing on 071 490 1323.

DEMOMANIAC

DIY demos are promised from Black Legend's forthcoming DemoManiac. Along similar lines to Red Sector's Demo Creator, DemoManiac is aimed at anyone who wants to use their Amiga to produce stunning audio-visual sequences, without having to spend years of sweat and toil learning the coding tricks of top demo programmers. Available effects and features include vectors, vector landscapes, vector worlds, animations, 6 layers of simultaneous graphic effects, importing of graphics and music, script control, zoom, fade in/out, bumps, support for 020/030/040 processors and AGA graphics, joystick and mouse controlled effects, IFF image, animation and sample support.

We'll have more for you next month, but for now you can contact Kompact on 0438 840003.



TEAM SPIRIT

New users to the Amiga market probably won't know what all the fuss is about. Team who? they say, Team what? If you've missed the boat in the rush to tell Marty Brown and co. what a wonderful bunch they are, then here's your chance to catch up. *The Team 17 Collection - Volume One* contains three of their best loved hits, at the extremely affordable price of £29.99. *Body Blows* is the game that knocked Streetfighter crying back to mummy, *Superfrog* is the cutest and greenest platformer yet and *Overdrive* is what your joystick and deep throaty 'brumm brumm' sounds were made for. What you hanging around for? Call Team 17 on 0924 291867.

SOUND IMPROVEMENT

HiSoft, who recently incorporated Microdeal into their fold, have announced two items of interest to Amiga sound and music fanatics.

The first concerns the upgrading of the Clarity 16-bit sampling software. As it uses the parallel port, Clarity can sometimes get confused when used with Amigas fitted with a 68020 or better processor. This is especially unfortunate as some extra processing really is needed to make the most of the 16 bit multi-sample playback features.

The new version 1.5 software finally solves these problems for good, which means all Amigas, from the humble A600 to the top of the range A4000 can benefit from Clarity's 16 bit sound.

Potentially even more interesting is the information released regarding a brand new sound sampling package. As yet unnamed, the new hardware connects via the PCMCIA slot on the A1200 and A600 to offer 12 bit stereo sampling, with a direct to disk option. When used properly, 12-bit sound can be almost as good as CD quality 16 bit so all would-be hi-fi sample fans should be prepared to rush out and buy in March. The best news of all is the price: provisionally set at only £79.95, this kit costs only a little more than standard 8 bit samplers. Stay with CU Amiga for a full review.

Finally, those interested in VideoMaster (reviewed this issue) will be pleased to learn that the IFF/Anim conversion software has been finished and is now being included on the same disk as the standard VideoMaster software. The stand alone utility will convert VideoMaster films into Amiga-standard Anim files which can be played back with most animation players.

ENGLAND BACK IN THE WORLD CUP?

Well, not quite. Sierra, those nice people who brought us so many wonderful graphic adventures, have decided to join in the mammoth kickabout currently brewing and release their own soccer game based on the World Cup. *Sierra World Cup*, as it is imaginatively titled, features a Striker-style forced perspective viewpoint, and promises even more realistic football action than ever before. New features include referees that run around the pitch after the ball, stretcher teams and a physio who actually runs out to repair your players! We'll have a full review next issue.

GOING FOR GOLD



Compilation freaks, hold on to your hats. Empire, those lovely people over in Finchley are releasing yet another of those incredible Award Winners packs. Priced at £29.99, by the time you read this you should be able to get your mitts on Award Winners Gold Edition, featuring in no particular order: the ground breaking Jimmy White's Whirlwind Snooker, Sensible's Amazing Soccer, that speedy Space Ninja otherwise known as Zool and the game that started it all - Elite. It came in a little too late for this issue's reviews, but it goes without saying that it's one of the best compilations we've ever seen. For more information, call Empire on 081 343 9143.

CD32 IN NON PRICE DROP SENSATION

Last month we stated that the CD32 was to drop in price by £100 in the first quarter of this year. Commodore would like to state that contrary to industry rumours, there are no firm plans to cut the price. Lew Eggbrecht did state in Toronto last month that the CD32 was to be cut by \$100 in the US, but this apparently will have no effect on the European market price.

LORDY LORDY



VE are gearing up to unleash Rowan Software's thrilling new flight simulator: *Overlord - D Day*. Using state-of-the-art imagemap animation and Gourade shading techniques, the game features an atmospheric recreation of the battle for air supremacy in the run up to June 6th 1944 - D-Day. The player will be able to fly Spitfires, Mustangs and Typhoons against Focke-Wulf, Ju88s and Heinkel 111 enemy craft, and the whole thing has been described as "mind benderly realistic" by a Virgin spokesperson. For more, call Virgin on 081 960 2255.

THE NEXT MILLENNIUM

Those Cambridge boys and girls have kept things a little quiet recently, but have just stepped out of the closet to unveil no less than FIVE new products in development. The shock news is that NONE of them have anything to do with JAMES POND. Not a fishy joke in sight. Not a single Picean reference. For example, Mr Magoo, based on the popular cartoon of the same name, has no fish in it whatsoever, although the cartoon graphics make the game look decidedly similar to the actual cartoon. *Brutal Soccer* is the continuation of *Brutal*.



Football, and the only place you'd find a fish in here is in the shower room, though we doubt it. *Troll Island* is an odd one, as a colourful collection of *Troll Island* inhabitants work through their daily lives. You never know, one of them might eat fish.

Motor Mania sees Micky the Micra saving the day when the bad fog of pollution send the factory into chaos, leaving him to sort out the mess in a brain teasing time sort of way. *Neural World* is the strangest of the lot. Remember *Little Computer People*, where you had to keep a little chap entertained? Take that (scream!), then add the fact that you have to educate them. Strange, and not a fish in sight. James Pond 3's coming too. Oops. Call Millennium on 0223 844894.



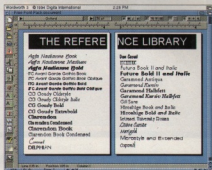
WORDSWORTH 3

If you like a few bells and whistles on your word processor, *Wordworth 3* could be right up your street. Already an accomplished word processor in it's previous release, the new version 3 has an impressive number of promised new features.

Auto correction will give you the option of automatic spell-checking and correction while you type. Activated by the spacebar, the auto-corrector can be used as a simple spell-checker, or as a means of speeding up your typing by defining words to abbreviations. For example, if you find yourself getting bored of constantly typing your company name in correspondence, you could tell *Wordworth 3* to replace the letters "MMM" with "Manchester Multimedia Magnates", thus saving your precious pinkies from too much wear and tear on the keyboard.

An on-line librarian feature is also billed. Another labour-saving feature, this could act as an alternative to repeatedly typing out often-used addresses, paragraphs and so on, which could be written once, stored, and then recalled from a menu and pasted in to the current document. A collection of 50 *Agfa* Compugraphic fonts are also included.

Extensive file format support should ensure compatibility with Mac, DOS and Windows-based systems. *Digital's* own custom printer drivers come with the update, replacing the *Workbench* drivers in order to get the most from your printer. The update will be available to registered *Wordworth* users for £49.99. Users of other WPs can upgrade for £59.99. Contact Meridian Software on 081 543 3500.



ART DEPARTMENT PROFESSIONAL 2.5

As we go to press, news has just reached us of the latest update to *The Art Department Professional*, now up to version 2.5. Details are sketchy at the moment, but we have it on good authority that it features a style-guide compliant user interface. Meridian Distribution are handling the main distribution (tel: 081 543 3500), while Emerald Creative Technology Ltd are dealing with upgrades for registered users, and can be contacted on 081 715 8866.



Image processing is about to take another giant step forward.



TWO'S COMPANY

Sensible Software, the purveyors of such fine software as *Cannon Fodder*, *Wizkid* and *Sensible Soccer*, have linked arms with Virgin Interactive Entertainment (formerly Virgin Games) and announced their big Christmas release - *Sensible Golf*. The game is part of a deal between the two companies that will see Sensible exploding all across the console formats, and has Sensible Software preparing to set the sports genre alight once more with a golf game that will offer all the playability and addictiveness that *Soccer* had. More news as we get it.



Yes - more Cannon Fodder.

THE MILITARY SIMULATION OF THE YEAR

Don't take our word for it... Take their word for it!

"Simple to use, but complex in nature, Campaign II is one of the most demanding games available... a well researched and truly compelling in-depth warfare simulation."

PC POWER

"Highly playable, one can but hope for a third in the series."

CU AMIGA

"It's strategy, it's simulation, it's downright realistic warfare."

AMIGA ACTION

"Here's Campaign II - bigger, bolder, and flawless."

PC HOME

"A complex game with easy controls and great depth - smart."

AMIGA FORMAT

Campaign II heralds a new generation of WAR Simulations with more depth than ever before and fabulous 3D action. The sequel to the best selling "Campaign" has emerged as the most comprehensive simulation with new improved strategy at any level in the chain of command (C.O.C.), closely resembling that of a real military situation.

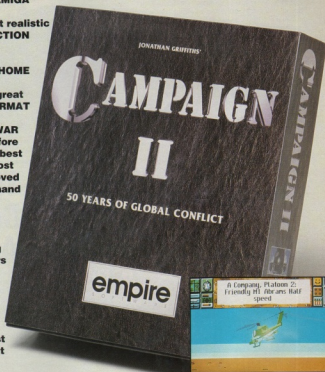
- Featuring all the modern weapons systems: guided missiles, rockets, homing missiles, laser rangefinders, gun stabilizers and night sights.

- New features include new improved strategy, helicopters and animated infantry.

- Including over 130 templates of the most significant military forces from 56 different nations of the last 50 years.

- Battle scenarios include: Vietnam, Korea, 6 day war and Desert Storm.

- Pack includes sophisticated map and battle editor, 170 page equipment fact finder, extensive user guide and photographic journal.



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HIGHLY PLAYABLE, REALISTIC, FLAWLESS,**

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» COMMODORE WRITES

Full of the joys of spring, Commodore MD David Pleasance splits the beans on the rising success of the C32.

'A tax has just popped onto my desk bearing rather pleasant news. According to Gallup, sales of Amiga C32 software now exceed sales of Mega CD software by 34.6% to 32.8%. The balance has been tilting steadily in our direction for the last few weeks, and I expect to see pull away from Sega at the same rate in the near future.

'The reason I'm so pleased about this is that quality and quantity of Amiga games has always been the key to the success of the range, and thanks to the diligence and imagination of developers, it looks as if Amiga C32 is getting the same support as its floppy relatives.

'Already there are 36 titles available for the new machine. Every week more titles emerge – some are obviously ports but others are specially enhanced or released simultaneously with other formats. We're in constant touch with the publishers so we know about some of the gems coming your way. In a few weeks time, games like Rise of the Robots and Microcosm will be available on C32, and I'm really pleased to see companies such as Grenell and Team 17 putting out budget compilations which take advantage of C32's huge memory. That's one of the reasons we all want CD to work isn't it?

'It can't be long before Gallup starts work on a Video CD chart. Slowly but surely the new platform is gathering steam. In January the music industry gathered at the shill we call 'atmospheric' Marquee club to discuss Video CD.

'Many of us have suspected that recent companies would give momentum to the new format. And here they were doing just that. BMG, BMG, Polygram and Castle were there pledging to re-release parts of their catalogue on Video CD.

'Their customers, more so than movie fans, are used to CD as a medium so the enthusiasm of the music big biz is understandable. The first true MPEG titles from artists like the Eurythmics, Queen and David Bowie will be in the shops in April.

Bowie will be in the shops in April.

PMI even announced plans to

release Video CD titles simultaneously with

VHS and that is

great

news.



LOGIPAD

There are pads, and there are Logipads. This is the latter of the two, and mighty logical it is too.

Featuring no less than six fire buttons, eight-directional thumb control, select/start buttons and independent fire buttons. Retailing at £18.99, the Logipad is available from Spectravideo, who can be reached on 081 902 2211.



MORE THAN MOST CAN HEIMDALL!

After many months of strenuous coding, Heimdall 2 is just about nearing completion, and Core Design are just chuffed to bits about it.

Based in the age of Ragnarok, the game tells the tale of the Hakrats, vile creatures created by Loki (a mean deity) who wants revenge upon the world for stripping him of his Godly powers.

The Gods themselves agree that something must be done to stop him, and send Heimdall – the hero of the first game, to cleanse the world once more.

At the moment, the whole thing looks incredible, even better than the first game. We'll have more news next month, but in the meantime for more information you can contact Core Design on 0332 297797.

AND A FREE BOOK AS WELL!

Impressions have made more than a small impact on the wargaming front, and they continue this month with the release of Edward Grabowski's *The Blue And The Gray*. Based on the American Civil War, the game lets you play either the Union or the Confederacy in one of the most important struggles in American history. This might sound like a right treat for wargame fans, but wait! There's more! If you buy a copy now, you'll find a present in the box in the shape of a huge fact filled history of the Civil War in book form. Who said they aren't good to you? We'll have a full review soon.

BEGINNER'S LUCK

Some guys get all the luck, as the Robert Palmer song goes, and newcomers to the A1200 fall easily into that category. Bruce Smith Books are about to release the *Amiga A1200 Beginners Pack*, everything you could possibly need to get started with your machine. £39.95 gets you Bruce Smith's bestselling *A1200 Insider Guide*, a copy of *A1200 Next Steps*, an exclusive one-hour tutorial video and four disks packed with essential PD and Shareware. What more could you possibly ask? For more information, please call BSB on 0923 894355.



Amiga

A1200 beginners pack

YOUR CHOICE

GAMES	UTILITIES
GA 071 AIR HARRIER	UT265 4 COPY 111
GA 076 JET STUNT RACE V2.0	UT265 RACE WAGON
GA 078 THE SUPRISONS	UT265 INSTAL VLSB
GA 080 COMMADOLPH	UT265 INSTAL VLSB
GA 082 LUMMAGE	UT265 REPAIR IT V2.0
GA 083 WHEEL OF FORTUNE	UT265 AMIGA VIDEO UTILS
GA 085 SUPER WYTHRIF	UT265 WALK RANGER
GA 086 PARK-CLUB POSET	UT265 CONSTRUCTION KIT
GA 088 ADAMS-GAMES PACK	UT265 DISK SALLY
GA 090 CHANCE TILES	UT265 PEEP 1.0
GA 091 NEBULA	UT265 ENGINEERS KIT
GA 092 THE ADAMS FAMILY Y DZ	UT265 LEMMINGS C-INSTALLER
GA 093 PHOENIX CREASIS 1	UT265 AGA TILES
GA 094 MARTIN WICKERMAN	UT265 AGA II UTILS
GA 095 AGA TILES & TOOLS	UT265 AGA II UTILS V2.0
GA 096 STANISLAS	UT265 TOOL LIBRARY V2.0
GA 097 MR. MFLN CLIMBERS	UT265 COSMOMASTER V2.1
GA 098 KLONGONE AGA	UT265 SPYGLAS AGA
GA 099 BLUE DIAMONDS 4	UT265 SPOT AGA
GA 100 JET STUNT	UT265 KICK 1.4
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BU004 FORMALLY CALIBRATED	ED004 KIDS PARTY	LA004 OSCAR AGA
BU005 AMERICAN BUSINESS	ED005 KIDS PARTY	LA005 QUIT CHALLENGE
BU006 CHESS FOR BEGINNERS	ED006 KIDS PARTY	LA006 COMMUNICATE (NON LANGUAGE)
BU007 CHESS FOR BEGINNERS	ED007 KIDS PARTY	LA007 BACK TO SCHOOL 111
BU008 LITTLE OFFICE	ED008 KIDS PARTY	LA008 A VERT 20 REC PLANNET
BU009 MONTAGNA AGA V2.0	ED009 KIDS PARTY	LA009 DISCRETE CLIPART
BU010 MONTAGNA MASTER V2.0	ED010 KIDS PARTY	LA010 PAPERMAN 1.0
BU011 KICK 1.4	ED011 KIDS PARTY	LA011 AMINUS 12.3
BU012 KICK 1.4	ED012 KIDS PARTY	LA012 MAGAN 11.0
BU013 KICK 1.4	ED013 KIDS PARTY	LA013 CANTON 8110
BU014 KICK 1.4	ED014 KIDS PARTY	LA014 POLICE 2.0
BU015 KICK 1.4	ED015 KIDS PARTY	LA015 PRINCE AGA (GAMES)
BU016 KICK 1.4	ED016 KIDS PARTY	LA016 DELETED SOUNDS
BU017 KICK 1.4	ED017 KIDS PARTY	LA017 MEDICINE (MUSIC)
BU018 KICK 1.4	ED018 KIDS PARTY	LA018 JLD AGA TILES COMP
BU019 KICK 1.4	ED019 KIDS PARTY	LA019 CLIPART BIBLE

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FOR IBM PC COMPATIBLES AND COMMODORE AMIGA



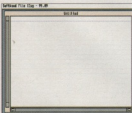
YOUR QUICK-START GUIDE TO LOADING DISK 76

Before you start, write protect the disk to prevent any mishaps. You're also going to need two blank disks (they don't have to be formatted).

1. Put disk 76 into the internal drive.
2. Double click the CU 476 icon.
3. Double click the Craft or Optics icons according to which program you want to look at. Some programs that you choose will need to be expanded onto its own separate disk. Follow the on-screen instructions to do that.
4. NB: Boot from your expanded disks or coverdisks only. Do not load from your Workbench or hard drive, otherwise you will be told that you don't have the update library—which is, in fact, on your expanded disks.

File II SG is a database program, which means that you can use it to store lots of pieces of related information, such as addresses, or lists of records or games. You can even use it to store pictures and sound samples.

The File II SG program does not need to be expanded. It can be run immediately from the coverdisk. However, because you can customise the program to your own preferences, you are strongly advised to make a back-up copy of the coverdisk and use that instead.



The program looks a little barren when you first load it, but this plain exterior hides a powerful database program.

To load the program, simply double click on its icon, and after a few moments the main window will appear. Before you can use the program for entering data, you'll first need to specify the subject headings and type of information that you want to store. To do that, select Define Data from the Column menu. A

COVERDISK 76

This month's knockout package of software includes **File II SG**, an excellent data-base program from Softwood, **Craft**, a fantastic extension for AMOS which gives you dozens of extra commands to help you create even more impressive programs and enjoy part two of our *Weird Science* series.

FILE II SG

requester will appear ready for you to define a new column. You'll see the words "Column Name:" with the cursor all ready for you to enter a new name. Let's assume that you are creating a phone list. The first item in your list would be the people's surnames so just type Surname. Now you must indicate the type of data—there are ten types to choose from. The type that you choose depends on the sort of data that you'll be entering in the column. Here are the different types:

Text: You can enter any printable character into this type of column.

Amount: You can only enter numbers and decimal places.

Date: You can only enter dates into this type of column.

Time: You can only enter times into this type of requester.

Yes/No: Yes or No answers only in this type.

Phone: Numbers, spaces and brackets go in this column.

Alpha: Upper and lower case letters only. No numbers or punctuation.

A/N: Numbers and letters only. No punctuation.



The program supports 10 different data types. By choosing the correct type for each column, you can save both disk space and memory. If you're not sure which one to choose, play it safe and select Text.

Picture: This column can hold IFF Pictures (not AGA or 24-bit)

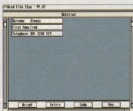
Sound: This column can hold IFF samples.

Because surnames can contain letters and punctuation, you need to

specify the Text data type so click on the word Text, then click OK to return to the main screen. Now you'll need to define a column for the first name and phone number. Select Define Data again and call the column First Name. This time the data type can be Alpha because there are no first names with punctuation or numbers. When you come to define the telephone number, remember to define it as the Phone data type.

Having defined your three columns, you're ready to enter some data. On the main screen the three columns should be visible, so go into data entry mode and move the cursor into the first column next to the word "New". Click the left mouse button and the display should switch to show your record as a form with the three column names one on top of the other. You'll notice that the cursor (a vertical line) is in the first data area ready for you to start typing. Type a surname of your choice then press return or enter. As you do so, the cursor jumps down to the next box, so type a first name and press enter. All that remains is to type a phone number, so input a number of your choice then once more press return.

This time, instead of the jumping



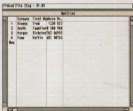
This is the screen where you'll enter your data. The program automatically capitalises each word, although you can switch this feature off if you want.

down to the next data area on the page, the page disappears and is

replaced by a blank one ready for you to enter more names.

Of course, the information is not lost, it's merely been stored in memory ready for you to look at later.

Now enter four more names and phone numbers so that we have a database containing five entries in all. When you've entered the fifth phone number, we want to return to the main window.



This is what you should see once you've added some records, though the column widths are wrong.

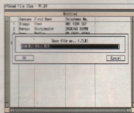
To do this you can either select List from the Options menu at the top of the screen, or click anywhere on the pale cream coloured bar at the bottom of the screen.

Back at the main window—unless all your friends have very short names, chances are some of the letters have been chopped off because the column isn't wide enough.

Not to worry; your data is still intact, it's just that the screen display hasn't been adjusted yet. To do that, move the cursor into the very pale cream coloured strip at the top of the screen, and place over the line at the end of the first column. As you do so, the pointer changes to show the words "Column width:". Now press the left mouse button down and keeping it pressed, drag the column to the width you require.

So now we've created a small database, let's save it in case of accidents. Using the mouse, select Save as from the File menu. A requester will appear containing the words

"DH0:Unfiled.FLR". This is the file name and path. The program expects all databases to have the characters .FLR after their name. To save your database, delete



The save requester. After the path and file name to suit your own preferences. Don't forget to leave the characters .FLR after the end of the file name so that the program can find your data when you want to reload it later.

everything in this requester and enter the drive name and file name that you wish to use. Don't forget to add the characters .FLR after the name. For example, if you want to save your database on a disk in the external drive in a drawer called DATA, with a file name of ADDRESSES, type DF1:DATA/ADDRESSES.FLR

Once you've entered a name, press return or click OK and the file will be saved. Unless you alter the default settings, the program will always look to DH0: when you come to load and save data.

To change those settings, select Default Runtime Values from the Desk menu. A requester will appear in which the Database, Sound and Picture path names are all specified.

To change them, simply erase the current values, and replace them with the path names of your choice. Select OK to return to the program, and the new path names will auto-



This is where you can alter a number of crucial settings, such as memory usage and the default path names to your various files.

matically be saved to the disk if it's not write protected.

Now let's suppose you want to alter the order in which the names in your database are presented. The program gives you the option to arrange data in forward or reverse alphabetical order.

To arrange a column, simply click on the column name (it should turn blue) then select Low to high or high to low from the Sort menu according to your preference. The data will be



Having selected a column name, you can tell the program to arrange the data as you like either in alphabetical or reverse order for you.

automatically rearranged for you. You can also alter each column's justification, that is, the way the text is positioned within the column. There are three options: Left, where the text is aligned with the left hand edge of the column - this is the default. Right: the opposite to left which is useful when a column contains numbers. Centre: aligns text up with the centre of each column so there is an equal amount of space at each end. To alter a column's justification, click on the column name, then select Left, Centre or Right from the Column menu.

That's all we've got space for here, but if you want to get the very best out of this superb program, you might like to order a full manual directly from Softwood Europe. Full details on page 25.

IF YOUR DISK WON'T LOAD

If your coverdisk doesn't seem to work as it should, then follow this simple guideline. Firstly, remove all unnecessary peripherals, such as printers, modems etc. Follow the instructions of these pages to the letter, and if after that you find that the disk still doesn't work, call the PC Wise helpline on 0685 250505 to Friday, if they advise you that the disk is faulty, then pop it in an envelope with a covering letter explaining the problems to:

CU DISK RETURNS, PC WISE,
DOWLAS TOP BUSINESS PARK,
WERTHUR TYDFIL, MID GLAMORGAN
CF45 2TY.

Please include 28p per disk to cover postage and packing (35p for overseas readers). Your disk will be tested and a new, working one dispatched to you as soon as possible. Please note that neither we nor PC Wise accept responsibility for any disk damaged due to negligence on the part of the user.

DISK VIRUSES

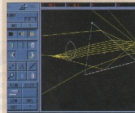
We try to ensure that viruses do not get on your disks. We always have the most advanced virus checkers available when the disk is compiled and every program goes through rigorous testing. However, we can accept no responsibility for possible damage incurred by viruses which have escaped our attention.

WEIRD SCIENCE

CU AMIGA proudly presents part two of our *Weird Science* series bringing the wonders of science onto your Amiga. This month, we give you the chance to experiment with the world of Optics, examining the way that light and lenses behave. Who knows, perhaps one day you'll be able to use this knowledge to design your very own lasers some-time in the future!

UPLOADING

To load the program, insert the decompressed disk into your computer and turn the machine on. After a few minutes of loading, the



Use this month's *Weird Science* program to test how light rays move and react to modifiers.

Workbench screen will appear.

Double click on the optics icon, then double click on the optics icon that appears in the window that opens. The program will automatically load in a few moments and you'll be presented with the main screen.

Provided you don't click the Save button, nothing that you can do on this screen can in any way do any damage so by all means experiment by clicking buttons, etc. Provided your disk is write protected, even the Save button will have no effect.

SEE THE LIGHT

The program consists of two basic elements, the light sources and the modifiers. There are three light sources, single beam, divergent ray and parallel ray. These are represented by the three top icons with yellow lines coming out of them.

Select the type of light source you want and position it on the screen. As you click the mouse button, a requester will appear which allows

This is the requester you'll see as you position a light source. It lets you specify the light's colour and other spectral qualities.



you further specify the characteristics of the light. Once you've set this up according to your requirements, click OK to place the light source.

Now you must do the same thing with the modifiers. There are five different lenses: a flat mirrored surface, a flat absorbent surface, a three or four surface lens, a curved mirror and a curved lens. The icons representing these are to be found immediately below the light source icons.

LENS US A FIVER

Select the modifier you want to use, position it where you want it, then click



When you place a lens, you'll be offered the opportunity to tailor it to your exact requirements.

the mouse button, upon which you will again be shown a requester allowing you to customise the modifier. If you choose the multi-surface lens, you'll need to define two or three of the surfaces, and to do that, just click the start and end position of each one.

To reset the light beams without, altering the modifiers, click the R button. To redraw the beams, click Go!

IDEAL WORLD

When you have played around with the program to your hearts content, you can then choose whether to see the results of your experiment under Real World or Ideal conditions by clicking the Real/Ideal switch at the top of the screen. The program will then redraw the beams accordingly and you can watch in amazement.



By clicking the Ideal switch at the top of the screen, you can see what would probably happen if your experiment was performed under perfect conditions.

THE WORLD OF SCALA

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COVERDISK 76

Just because *Blitz Basic 2* has stolen AMOS' throne doesn't mean to say that programmers have neglected Europress' brilliant BASIC language. Jason Holborn takes you through Black Legend's *Craft* extension.

CRAFT INSTRUCTIONS

Black Legend's *Craft* is an extension for Europress' AMOS programming language that adds no fewer than 160 new commands to the existing AMOS instruction set.

For AMOS programmers everywhere, *Craft* has the bees knees – short for 'Colour, Requesters, Audio, Fractals and Turtle'. *Craft* addresses many of the areas that the basic AMOS instruction set neglects.

As you can probably guess from the definition above, *Craft* gives you commands for creating fractal graphics, a range of powerful requesters and a lot more besides.

Before you can use the demonstration version of *Craft* on this month's coverdisk, you'll need to not only decompress the *Craft* file but also install the *Craft* extension

files on your copy of AMOS. *Craft* fully supports both AMOS Classic and AMOS Professional although it won't work with Easy AMOS. Follow the detailed instructions within the box elsewhere on these pages and you won't go far wrong.

ABOUT TURN

Once you've installed *Craft*, you're ready to start using it. Because *Craft* is an AMOS extension, you'll have to start by booting up your copy of AMOS with the *Craft* extension files installed. If you want to check to make sure that *Craft* has indeed been successfully installed, use the 'About Loaded Extensions' option from the 'AMOS' pull down menu in AMOS Professional – extensions 18 and 19 should be 'Craft extension' and 'MusiCraft extension' respectively followed by

your name. If you're using the Classic version of AMOS, a list of all loaded extensions should be displayed when you first boot up.

Right, now we're ready to get stuck into *Craft* – if you just can't wait to see what *Craft* is capable of, why not load up a couple of the demonstration programs on the 'Craft Examples' disk which was

created by the *Craft* installation program? These can be found in a drawer called 'Examples' on the disk. Inside this drawer you'll find a number of demonstrations and a number of additional drawers which contain even more examples covering particular areas of *Craft* obvious talents – Fractals, Audio etc.

So now, give 'em a whirl.



Craft's Fractal generation commands are surprisingly quick – this impressive Mandelbrot image took under six seconds to produce!



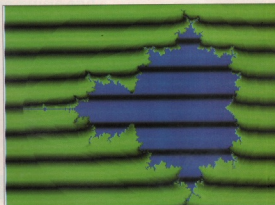
Craft adds over 160 new commands to the existing AMOS instruction set that cover a whole range of different areas of computing.

INSTALLING CRAFT

Craft cannot be run directly from our coverdisk. You must have a copy of AMOS. If so, a fair bit of setting up is necessary before you can experience the delights that *Craft* has to offer. The first thing you must do is to decompress the *Craft* file which has been cleverly packed onto our coverdisk using the PD disk packer, DMS. All you have to do is to double click on the *Craft* icon and a window will appear prompting you to insert a blank disk – follow these onscreen prompts and DMS will unpack *Craft* onto your disk. You're then ready to move onto the next stage.

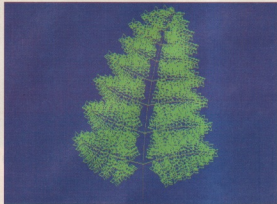
Obviously *Craft* is of little use to you unless you own a copy of either AMOS Classic (we gave it away on our coverdisk many months ago) or – better still – AMOS Professional. If you don't own AMOS, then you may as well stop right here. If you do own AMOS, however, you can start to install *Craft* onto your copy of AMOS. The first thing to do is to reset your machine and boot up from the *Craft* disk that we decompressed earlier. After a few seconds, a very flashy screen containing the *Craft* logo will pop up onto the screen and you'll be prompted to enter your first name and then your surname. *Craft* automatically embeds this into your copy of the extension when it is installed, so it's important you don't enter anything stupid like 'All Loughbottom' (apologies to those unfortunate enough to have this name!).

Once you've entered your name, *Craft* will then write it to the disk and prompt you to reset your Amiga. Do as it says and then wait for *Craft* to boot up again. When it does, you should see an entirely new screen containing a list of the different versions of AMOS which *Craft* can handle – click on the version of AMOS that you own (AMOS Pro owners with anything greater than version 1.11 should click on the '1.11' gadget) and *Craft* will install onto your version of AMOS. During this extension installation process, the *Craft* installer program will also create a second disk containing lots of *Craft* demonstration programs so have a blank disk at the ready.



Clever use of the 'Fr Colour' command can produce some interesting results!

39



"Organic" images such as this leaf are well suited to Craft's Turtle graphics commands.

CRAFT LAID BARE

We have briefly looked at what Craft is capable of, but now it's time to look a bit deeper.

It's impossible to adequately discuss every command in the amount of space that we have available here (so it will definitely be worth your while buying the *Craft* manual that explains them all in detail). In the meantime however, here's a

cut above the rest as they allow you to create what Craft calls "Palette Banks" (which are similar to "Sprite Banks" but they hold palettes) and then perform all manner of palette manipulation operations such as copying colours, swooping colours (a bit like the DPaint "Exchange" option) and even spreading colours to produce a range of shades between the first and last colour in the spread.

REQUESTERS

AMOS has never been particularly strong on the requesters front but Craft sorts this little problem out with the addition of two new Requester commands – "Sys Request" and "Guru Alert". Not surprisingly, Sys Request produces a system requester similar to the "Insert Disk in Drive Dfn:" requesters you see on the Workbench (but in AMOS style) and "Guru Alert" produces one of those flashing alerts that appear on the screen every time something terrible has happened.

EXTENDED AUDIO SUPPORT

I know, I know, AMOS has fully supported Sound Tracker "MOD" format music files ever since Europress released AMOS Classic version

Need a clock program for your Amiga? This clock is being generated in realtime using nothing more than turtle graphics!

briefly run down of the great things that Craft has to offer:

COLOURS

Craft's strongest area has to be its impressive selection of colour palette handling commands.

These commands are certainly a

```
Directory of dfr:
C:\32FontEnd2.info
Info
C:\32FontEnd2.info
C:\32FontEnd2.info
C:\32FontEnd2.info
C:\32FontEnd2.info
C:\32FontEnd2.info
C:\32FontEnd2.info
C:\32FontEnd2.info
```

```
Directory of dfr:Accessories
C:\32FontEnd2.info
C:\32FontEnd2.info
C:\32FontEnd2.info
C:\32FontEnd2.info
C:\32FontEnd2.info
C:\32FontEnd2.info
C:\32FontEnd2.info
C:\32FontEnd2.info
```

```
Directory of dfr:Examples
C:\32FontEnd2.info
C:\32FontEnd2.info
C:\32FontEnd2.info
C:\32FontEnd2.info
C:\32FontEnd2.info
C:\32FontEnd2.info
C:\32FontEnd2.info
C:\32FontEnd2.info
```

Another impressive feature of Craft is its powerful directory handling commands which are an added "plus" on top of the commands that Craft has to offer.

CHAOS RULES OK!

Possibly one of the most fascinating areas of Craft is its Fractal graphics commands which provide AMOS with all that is needed to generate impressive Mandelbrot and Julia set images on a par with those produced by commercial fractal programs such as *Fractal Pro 6.0*. Let's take a look at a few of the more important commands that you should be aware of. Once again, the best way to get to grips with these commands is to experiment with the demonstration programs you'll find on the *Craft Extras* disk.

FR POSITION X,Y

The "FR Position" command defines the geometric co-ordinates of the upper left-hand corner of the screen. To get the fractal generation working as fast as possible, however, the values that you pass must be multiplied by 8192 (don't ask me why – it seems that the programmer has found some new system that beats the hell out of Benoit Mandelbrot's algorithm). The Mandelbrot set lies within the area -2.0x-0.1 and -1.1x1.1. The co-ordinate origin, however, must always lie approximately in the middle of the screen. If you set X to -16000 and Y to 12800 and use a "STEP" value of 100 (we'll be covering this "STEP" value next) you'll be able to adequately display any set on a standard 320 by 256 pixel screen.

FR STEP X,Y

This command defines the scale (or the "zoom level") of the screen when the fractal

is generated on both the "X" and "Y" axis. Possible values range from 1 to 1024 with the larger values covering a wider area of the set. A value of one will give the maximum possible zoom level. The scale level is specified separately for the "X" and "Y" axis to allow you to tailor the aspect ratio to suit the screen that the fractal is being displayed within.

FR WINDOW SCREEN,X,Y,WIDTH,HEIGHT

This command lets you specify which screen the fractal is drawn into and both the position and size of the fractal "window" (the area of the screen which the fractal) will be drawn into). If you simply pass the number of the screen without any further parameters, the fractal will fill the entire screen. The "X", "Y", "WIDTH" and "HEIGHT" parameters let you specify a portion of screen with the rest being left blank.

FR COLOUR INDEX,COLOUR

This command defines which colour is drawn for a particular iteration. The "INDEX" parameter defines the iteration number and the "COLOUR" parameter defines the colour register which will be used for that particular iteration.

FR MANDELBROT ITERATIONS

Finally, we have the "Fr Mandelbrot" command which, not surprisingly, is that all important command that actually generates your fractal. The "ITERATIONS" parameter sets the number of iterations that the calculations use.

System font settings	
System font height	16
Colours of the 48 screen	16
Colours of the pointer	16
X hat seat	16
Y hat seat	16
Current preferences settings	
System font height	16
Colours of the 48 screen	16
Colours of the pointer	16
X hat seat	16
Y hat seat	16

Craft adds many operating system friendly features to AMOS including the ability to read the current preference settings into AMOS.

1.34 but Craft's audio commands are a cut above the rest. Unlike Europress' own attempt at a Sound Tracker player, Craft's audio commands can play both sound samples AND Sound Tracker modules simultaneously – try doing that with your copy of AMOS Professional!

FRactal Graphics

One of the most impressive aspects of Craft is its support for fractal graphics in the shape of Mandelbrot and Julia sets. I'm sure you've seen the results of this fascinating area of computing on the album covers of such bands as Inspiral Carpeles.

(see something and grab it!)
BMS CRAFT EXTENSION

AMOS CRAFT EXTENSION

Okay, so this font isn't quite a Compugraphic outline font but it's pretty damned close – what's more, it was produced entirely using turtle graphics.

Fractal graphics are a bit too complicated to explain in-depth, but a brief breakdown of Craft's fractal commands can be found in the box elsewhere within these pages.

TURTLE GRAPHICS

If you didn't spend your entire school life skiving off behind the bike sheds with Flora Smith from the 5th form, then you probably remember a rather archaic language called 'Logo' that was used within schools to teach the basics of computer programming.

Although Logo was hardly a language of any great importance, it did offer one feature that is still finding favour – Turtle graphics.

The basic idea behind Turtle graphics is that you program an invisible "turtle" to draw images on the screen by passing it a list of instructions – move to position 100,100, rotate 90 degrees and then draw a line 20 units long etc.

As you can see, the major difference between Turtle graphics and conventional graphics commands is that Turtle graphics use a system that makes every command operate RELATIVE to the last command.

That's all we have space for – time to go off and experiment with all that Craft has to offer. **CU**

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- Requesters.
- Audio system for Sound and ProTracker music.
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- Turtle graphics.

The comprehensively written 65-page manual will give you all the information needed on each command and include many useful examples.

The manual is easy to use, thanks to its good layout and the inclusion of a most helpful glossary.

The handbook is written both for beginners and experienced users alike and also offers interesting background information on subjects such as Mandelbrot and Julia fractals.

If you want to get the most out of your coverdisk (and AMOS), then there's no time to waste – fill out the coupon below and return it without delay!

We have another special offer for CU AMIGA AMOS enthusiasts... Now that you have read about and been able to test CRAFT for AMOS, we can offer you the complete boxed version for just £19.99! (It usually retails in the shops for £25.99.) And this includes a free budget game from the Legend label, valued at £9.99!

You get the complete boxed version of CRAFT for AMOS, including disks and handbooks; plus one of these highly playable brand-new titles; *Megamotion*, *Hyperion*, *Summer Camp*, *Winter Camp*, *Hungary For Fun* or *Creaburen* (worth £9.99 each) for free!

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YOUR QUICK START GUIDE TO LOADING DISK 77

This month, loading your disk is very simple indeed - all you do is put the disk in your Amiga and switch the machine on. Simple.

First of all you should read the K240 preview on page 63 because you'll need as much background information as you can get before you consider tackling our enormous K240 playable demo. Once you've done that you can begin. Ready? Then let's start.

So what do you actually have to do? Well, you have a single asteroid and a whacking great chunk of money, and so does the alien you're up against.

All you need to do is equip your asteroid sufficiently and wait for the enemy to turn up. Before you sit back and assume that there isn't much to do, take a quick look over the multitude of menus you have to play with.

Remember, this game isn't just about war; you've got an entire colony to play with, and half the fun is making sure that the colony is thriving before you start worrying about the opposing ships. Incidentally, they're looking for you too, and chances are they'll find you first!

There's a lot of game here: K240 has a wealth of options and menus, but the nice thing about it is that you can pick it up with almost no instruction. This window shows you the various buildings you can choose from, along with their uses.



This is the view you'll spend most of your time with. As you play the game, you'll get to recognise all the different buildings.

tion at all, and be completely in control in no time at all.

Just to get you going, though, here are a few pointers on what you should be doing throughout.

BASIC CONTROLS

The game is controlled with the mouse. As a rule, the right mouse button brings up a sub menu and the left mouse button selects an option or builds on empty land.

If you find you are using the same options over and over again, and don't want to keep working through the menus, then holding down the left mouse button for a second or two over the menu option extracts the button and places it on the side of the screen, where you can reach it much more quickly and easily. At any point, to leave a menu or confirm an action, click on the Return icon, which is always found in the bottom right of the current window.



You can't actually buy anything from Sytech in our demo, but you can at least appreciate the joys of catalogue shopping. A sort of interplanetary Argos really!

BUILDING

There are two ways of selecting the building you want. The first is to bring up the building menu and flick through the choices as they are shown. This is ideal for beginners to the game, as it tells them exactly what each building does and how much it costs to build.

The other way is to click on the number icon in the bottom right of the display, which allows you to flick through the various monoliths.

THE VIEWS

There are essentially two different views of an asteroid that you need to know about. One is the close-up view, which is where you are dealing only with a particular asteroid (this is the view you start with), and the other is the sector view, which

shows you all the asteroids you have currently detected. In this mode, clicking on other asteroids selects them, allowing you to view and build on them.

ATTACKING

In our demo, you start with a set number of craft and missiles. To launch the appropriate area, and then select the destination when asked. To choose which craft or missile to fire, bring up the inventory screen (which appears when either missile or spacecraft are selected) and then click with the right mouse button in the bar next to the name you want. K240 will do the rest.

K240 is a huge game, and can seem a little bewildering at first, but as you experiment and toy with it, everything will become clear.

Have fun, and watch out for those aliens!



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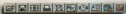


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Multimedia

Tired of all this hot air about so-called "multimedia"?

Want to try it out for yourself? Good - it's about time, so let CU AMIGA guide you through the hypertext maze and interactive jungle, with the definitive guide to creating your own multimedia masterpiece.

Multimedia is one of those magic terms that has yet to be tied down to a definitive meaning. But if any computer deserves the title of Multimedia Workstation, the Amiga must surely be it. No other micro can combine sound, graphics, animation and text so effortlessly. Even a standard out-of-the-box A1200 is capable of easily out-performing a PC, and a fully-equipped Amiga 4000 can be said to be state of the art.

The success of the Interchangeable File Format or IFF standard means that data can be freely shared between programs. Only on the Amiga can you be sure that an image created with a scanner will load directly into any graphics program. This ability to share data is taken a giant step further with ARexx - the Amiga's own inter-process communication language. With ARexx, any program can communicate with any other. So for example, a multimedia application can call on the skills of a dedicated stand-alone animation or sound playback program.

But what exactly is a multimedia application, and how would you go about writing one? Read on to find out more...

the Amiga



AREXX THE MISSING LINK

The missing link behind Amiga multimedia is **AREXX** – the interprocess communication language. Getting to know **AREXX** can be a frightening experience, but it is essential to harness the real power of the Amiga.

If your authoring program speaks **AREXX**, adding new features is easy. For example, the One Stop Music Shop synthesizer card comes with an **AREXX** compatible tune player. Using **CanDo**, **HyperBook** or most other development systems, an **AREXX** command can be sent to the player, which is quietly multi-tasking in the background.

The same principle can be used to add animation, sound effects even control over external video-recorders and laserdisk players.

THE ABC OF DIY

Any program which includes pictures, sounds, text and information can be said to make use of multimedia – and this leaves rather a large number of applications open, from games to education to dedicated information systems in shopping centres or offices.

A typical multimedia application is rather like a book that is filled with different pages of text and sound. Think of a graphic adventure program. Each game location can be considered as a separate page, and each page can contain a picture, some text and perhaps even some sound and animation.

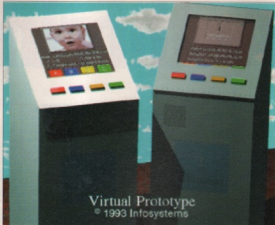
By choosing from a list of options, the reader of the book can choose which page to go to next. In the case of the game, this may depend on how well the reader is doing – if he or she has just fallen down a 50 foot well, the page would most likely contain the message 'You are dead - please try again'.

However, in a multimedia Point of Information system, (POI) system, the user can select which items of information they wish to see. The pages can contain text or pictures, and a narration can be triggered to inform the user or ask them to continue.

WHAT YOU NEED

Before you start writing your own application, you'll need several things. First of all, you'll need a suitable authoring program.

There are many dedicated packages to choose from, but even a programming language like **AMOS** or **SLiZ** is capable of doing the job. As long as the language can display pictures and text, play samples and accept input it will do the job.



Re-housing an Amiga and monitor in a smart new vandal proof box may be necessary. This approach offers the possibility of simplifying the keyboard to a set of coloured switches.

Next on the list is a way of getting your desired pictures into Amiga format and displaying them. There are many different pieces of hardware around that will do this, and we'll be taking a look at the most interesting later on.

Sound is also an important issue, and again we've looked at what's currently hot in audio hardware.

Of course, the public domain libraries are full of disks stuffed with pictures and sound samples, so to get started you won't even have to spend more than the price of a blank disk.

MEMORY AND STORAGE

When you need access to lots of graphics and sound, you'll soon find that even the highest of high density floppy disks aren't big enough for the task. When the graphics are true-colour 24-bit, and the sound is CD-quality 16-bit, the bits soon rack up and occasionally even a hard disk isn't big enough.

Imagine you are authoring a multimedia system for the local tourist board. You find that you'll be using about 50 hi-res, interfaced HAM8 pictures – already that's potentially over 10Mb of storage space. Add another few meg for a MED sound track and the control program and you've easily filled a 20Mb drive.

Moving video animations and sound will multiply this amount of storage by a factor of ten and then you probably might find the system is

un-economic. What if the drive fails? How many spare 200Mb hard drives have you got?

The answer could well be CD-ROM. At the moment the cost of creating a one-off CD is still rather expensive, but you can bet that the success of the CD32 and cousins will push the prices down.

If you do get your system onto CD it makes multiple platforms very easy to make – and it means you only need one CD32 player for video, computer graphics and CD-quality sound.

MOVING VIDEO

Still graphics are all very well, but for true 'interactive television' those pictures are going to have to move.

At the simplest level, normal IFF animations can be very impressive. As long as the number of colours is kept low, any Amiga can animate quickly enough to look impressive.

Commercial packages such as **Clarissa**, **Magic Lantern** or shareware programs like **MainActor** are **AREXX** compatible, and so can be used by the majority of authoring systems.

Playing back digital video is a lot more difficult. There are two problems: the first is the amount of space a video sequence will take up. Each frame of VHS quality video could be a megabyte big, and when you multiply that by 25 frames a second CD-ROM is the only viable solution.

The next problem is speed – if

you can't keep the data coming in fast enough the result can be horribly jerky.

One solution is to compress the data to reduce both storage and transfer speed requirements, and this is exactly what the MPEG standards does. Video is stored in compressed format, and then custom chips decompress it for display on-screen.

There are a few MPEG cards appearing on the market, but at the moment many seem to be beyond the reach of most home users.

There is a sneaky way around this problem however – don't use full-screen video. In most cases it is completely unwarranted anyway.

Only the top right corner of the display will actually need updating at speed, which reduces by a quarter the data required.

Reducing the colour requirements as well will mean that standard ANIM files and players can cope too.

Capturing the data requires extra hardware, although this needn't necessarily be a ludicrous expense. MacroSystems have developed a version of their superb **VLAB** video digitiser that will grab a sequence of video by making several passes of the original source. It also links with the **Tocatta** soundcard for a complete audio/visual system, costing about £800. MacroSystems are also working on a dedicated motion capturing systems, and we hope to bring you details on that when it is announced.

For the more budget minded Amiga owner, the **VideoMaster** system from **Microdeal/HiSoft** can't be overlooked. It may look like a toy, but it can capture video and sound at 25 frames per second – see the full review on page 110.

MAKING YOUR OWN HARDWARE

If your multimedia system is to be used in a professional environment, it may require a completely new housing. Building a plastic-coated wooden enclosure isn't very difficult, the hardest part is ensuring there is sufficient ventilation. Using coloured switches instead of a standard keyboard is a real step forward in user-friendliness.

The electronics behind such an improvement are ridiculously easy – simply wire up four switches to the second joystick socket.

Most software can accept joystick inputs which means you won't even need to write a special **AREXX** input handler.

order and

» You might like what you see here, and decide what you really want to do is to write your own multimedia application. The only problem is you're stuck for ideas – so what do you do?

WHAT TO DO?

Firstly, you might like to try looking around your local area. Many shopping centres are starting to place interactive terminals in large shopping malls. Perhaps you could create one on a more local level – in your Post Office for example.

If you would rather stick with less commercial aspects, take a look in the PD libraries. There are plenty of educational programs featuring digitised pictures, text and sound – could you do better?

Or how about creating a graphics based adventure program based on your local area, featuring your friends? All you need is access to a scanner, a video-camera and digitiser and your family can star in their own Zork adventure (or something). If you don't have a digitiser, check out the advertisements in CU AMIGA. Some advertisers offer digitising services – so all you need to do is send off your photographs, and get a disk of IFF pictures in return.

GET STARTED

Whether your multimedia program is going to be a game or a serious money-making scheme however, the most important stage in the development cycle is planning. Jumping straight in might be fun, but it will only result in total chaos as you try and work out exactly what is going on. Nothing is more annoying to an end user than a lack of consistency or the feeling that they are not really controlling what is going on.

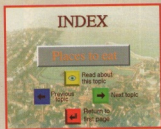
Spend as long as you dare planning your system. Start globally, looking at the system as a whole and then break it down into chunks. Fill pages of paper with squiggles until you know exactly what your system is doing.

Early on in the process you will have to fix the hardware aspects of your design. Will the user be running the application on their own Amiga? Will a stand-alone terminal be used? Is it possible to use an external video or sound source? Where will the system be situated – will it need to be

Authoring an

HELPFUL INDEX

This screen is offered for those who have maybe used the system before. They know they've seen something useful, but they can't quite remember where. In this situation the four buttons can become a hindrance – the user would really like a keyword search. Instead we offer a scroll through a list of options. A new tune plays here to make whittling away the time looking for the right word, a little less tiresome.



PLACES TO GO

The Places of Interest display allows the user to branch off and explore the multimedia database. Each button will lead to a sequence of different images, although there is also a "back to the start" option on each.

It is important to make even plain menu displays like this one as interesting as possible. The legends on the buttons are an attempt to instill a feeling for the video recorder style control of the program.



Bangor Abbey

Digging up information for places such as Bangor Abbey was remarkably easy, and took only one afternoon in the local library. However, it isn't always that easy. To get information for your system you might have to have several meetings with the prospective customer and be prepared to do a lot of book work and leg work to find out all the necessary information that you will require.



Shopping

Here's a bit interesting idea – why not try to sell advertising space in your multimedia system? This could help fund your venture, and help you get that state-of-the-art equipment that you've always been longing for. Local shops and premises might be willing to sponsor your development costs in exchange for a big close-up photograph and sampled jingle.



Marina

The page is displayed along with some Seagull sound samples taken from an old BBC sound effects record. It introduces a new concept of printed matter – many users will want a permanent copy of the information, and by pressing the yellow button a small text file is sent to an auto-sheet fed bubble printer next to the computer system. The weather, however, did not help the pics.

Application

Help!

Welcome to this computerized information system.

It has been designed to be easy to use.



Please press the Red Button to continue...

A lot of users will never have seen a system like this before, so it's important to offer guidelines. Many people will be afraid that pressing the wrong button at the wrong time will break something, so it's important that they are reassured. Keep text simple. This screen also triggers a section of sampled narration to convince the user they have nothing to worry about, and also provide instructions quickly.

This is one of the more interesting selections the user can take. It launches a part of the program that displays a continuous presentation. New images are accompanied by a full narration, and music is played in the background.

Using the various wipes offered by the authoring software, a really smart near-TV quality programme can be produced. I find that an image processed digitised picture (thanks ADPro!) makes a perfect backdrop for text.

As the first part of the guided tour images it's important to set the scene before launching into any detailed descriptions. Notice the Stop and Pause buttons which can restart or temporarily freeze the current action.

For this rather smart looking building, regal music is played via a MIDI module and the sound card is used to replay a brief history directly from hard disk. Speech doesn't require full-CD quality (certainly not stereo anyway), so it can prattle on for several minutes as different views of the building are displayed.

This section introduces a small section of moving video. After the nice colour picture has been displayed, a short monochrome animation shows passers-by and pigeons walking around the clock. Even a digitiser like Videomaster will produce very pleasing results.

Draw a box for each different display. The arrows indicate the flow of control backwards and forwards between different pages in the Hyperbook.

vandal or weather proof? What sort of interface will the user be presented with? These are all important questions which shape your finished system.

USER INTERFACE

When designing a user interface, try to keep in mind as many different people as possible. Not everyone is as expert at the Amiga operating system as you. In fact, your system could be the first computer a person has ever decided to use.

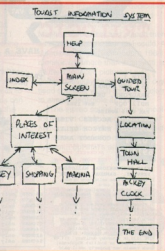
Think of the technophobic housewife, the old-aged pensioner, the cocky computer literate school kid, and the bored IT professional who wants information in a hurry. Your software may have to cater for all these people. Try not to use computer related terms (even phrases such as "Hit Return" can stump many), but above all avoid being patronising.

If you are building a stand-alone system, try to use buttons which are colour coded and can be placed beside the main monitor display. On a home system, make good use of the mouse and normal Amiga keyboard shortcuts.

Since most people know how to use a video recorder, a favourite interface is based loosely on this sort of control. A "Play" button can bring you to the next page, "Pause" will halt the proceedings and "Stop" can terminate the entire process. If you use icons, for heaven's sake make them understandable. Use big, bold colours and test them by showing them to someone else.

INFORMATION ENGINEERING

Getting hold of information in the first place is an entire discipline in itself.



This is the most important screen of the entire project, as it will be the first display a user will see. It has to be inviting, look easy to use and avoid all types of jargon. It cannot intimidate, or it won't be used.

A tranquil tune plays whilst this screen is displayed, preferably one which won't drive anyone who has to listen to it a lot to distraction.

There are four options, one for each coloured switch on the terminal. The first leads to a Help screen for the scared. The second promises a Guided Tour - notice how the estimated time is given. The third will quickly produce a list of interesting places, and the last offers a way of finding specific information quickly.



If the user has reached this far, they deserve some kind of reward. It is important that you manage to get this in order to test the system. There may be thousands of different ways of traversing the system, but it's up to you to ensure none of them will crash the computer and leave the same image on the monitors for days at a time.



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All registered trademarks are acknowledged. Enquire are most welcome but please phone first to check availability & avoid disappointment - we try to keep most items in stock unlike some of our competitors and will gladly get items made to order if they are unavailable from time to time. IN VOUCHER ORDERS TO SOME ITEMS PAID BY CREDIT CARD - SEE OUR WEBSITE TO OBTAIN DATE - IS EITHER DELTA/CORNET AND cashless. IN VOUCHER ON ALL AMEX CARD SALES

To create a theoretical tourist information system, I paid a visit to the local library and bought a bunch of leaflets. These contain more background information than I could possibly use, and provided a whole host of ideas.

The next task was to pick a nice sunny day and travel around town with my trusty 35mm camera. I was planning to scan the photographs after developing and printing, but if I had managed to keep hold of that Canon still video camera that I had a year ago I would have used that instead, most likely.

Sound was proving to be a problem, but I decided that as this system was going to be used by ordinary members of the public that as much narration as possible was required. This implies quite a large hard drive, and some direct from disk sample replay software.

Getting an introductory single and some tunes was a matter of asking a musically talented friend to create some MED modules. He sampled a MIDI module for the best quality sound.

For sound effects, I looked through some old record shops until

I found the old BBC Audio Effects album I was looking for. I had decided early on to use CanDo, because as the name suggests I find it can do just about everything, and still manage to produce a stand-alone program.

Once you have a few hours experience with CanDo, each page of the system takes only minutes to produce. Items such as buttons can be easily duplicated, although the most time-consuming part of the process was getting the graphics and sound just right.

When all the software was work-

ing, it was time to build a dedicated cabinet. I used some illuminated arcade game style switches (try Maplin Electronics) and placed them as close to the monitor as I could. A standard Philips/Commodore 1084 monitor was more than adequate, as all the interlaced pictures I was going to display came from real digitised sources, which reduces flicker to almost negligible amounts.

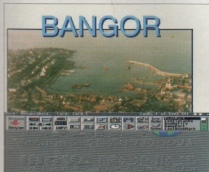
The stereo sound from the monitor meant I didn't need an external audio amplifier. After extensive testing it was time to try and sell my system... but that's another story!

Software reviews

So now you know how to create your own multimedia products, it's time to look at the available software which will help you complete the job.

CANDO2

One of the first, and still one of the best authoring programs is CanDo from Inovatronics. This has to be one of the most underrated Amiga programs ever - hardly anyone seems to realise that you can probably do almost anything with CanDo.



Using CanDo to create the Tourist Information system was quite straightforward. The buttons were actually part of the screen image to keep palette match problems at bay. Overlaying some of CanDo's "shape only" buttons ensured they still did something when they were clicked (when I was testing it). In the finished system, the joystick reading routines were used to scan the extra switches connected to the second mouse port.

Programs or decks consist of special cards. Each card can be a window or a screen with or without an IFF picture backdrop. AGA images are now fully supported in the latest versions.

On the card you can place animations, buttons, text, lists of items, pull-down menus - just about everything you might need. You then write scripts (by pointing and clicking, or directly with a text editor) to define what happens whenever a particular action is taken. For example, a button may inform CanDo to display a new Card or play a sound sample - or both.

Other actions are handled automatically, so for example inserting a new floppy disk can be detected. There is even a timer to launch specific scripts at specific times. Input support is extensive, as is the ARExx interface for linking CanDo Decks with other programs.

CanDo is my multimedia tool of choice. It might not be lightning fast, but it does almost everything I could possibly need.

Product: CanDo 2.5

Price: £149.95

Availability: Meridian Software, Tel: 081 543 3500

HELM

Helm is a relatively new multimedia authoring program, that seems to be a cross between CanDo and HyperBook. It offers a huge range of options including remote CDTV control and AGA graphics support, whilst avoiding the multiple sliding screens of CanDo to provide a slightly faster user interface.

It has special features dedicated to creating hypertext documents, and remember these text files can now also include moving graphics and sound. Creating pictures is made a lot simpler by the inclusion of a dedicated drawing program, so you don't have to keep flipping back to Deluxe Paint or whatever.

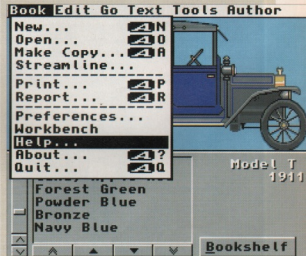
Best of all is the freely distributable browser program which means you can share your work with anyone who has an Amiga.

If you wish HyperBook had been updated, then you'll be pleased to know that it has. It's just changed its name to Helm in the process.

Product: Helm

Price: £99.95

Availability: Meridian Software, Tel: 081 543 3500



The familiar Amiga DOS gadgets and requesters make Helm an easy program to use. Create hypertext instruction manuals in minutes and send them to all your friends with the freely distributable browser program.



GOT WAR

We are recognised in the Amiga community as one of the leading specialists in Hard Drives and Mass Data Storage.

AMIGA A4000/040

The flagship of the Commodore Amiga range. Based around the 68040 processor. Comes with a Hard Drive, 2+4 RAM and WLB 3.0.

85 Mb version - £1899	340Mb version - £2069
130Mb version - £1919	426Mb version - £2149
200Mb version - £1939	540Mb version - £2299
250Mb version - £1979	

AMIGA A4000/030

The same specifications as it's big brother but designed around the 68030 processor. The A4000/030 comes with a Hard Drive, 1+1 RAM and WLB 3.0.

(FOR 2+2 PLEASE ADD £69)

85 Mb version - £899	340Mb version - £1099
130Mb version - £969	426Mb version - £1199
200Mb version - £999	540Mb version - £1299
250Mb version - £1039	

AMIGA A1200

The A1200 sports many of the features of the A4000 series. Based around the 68020 processor with 2Mb of RAM and WLB 3.0 as standard. A full range of Hard Drives are also available for the A1200.

Basic A1200 - £289	120Mb H.D version - £494
40Mb H.D version - £388	170Mb H.D version - £528
60Mb H.D version - £445	200Mb H.D version - £548
85Mb H.D version - £468	256Mb H.D version - £578



DESKTOP DYNAMITE PACK

The desktop Dynamite Pack contains 5 pieces of software written specifically for the AGA chipset, which includes DpointAGA, WordworthAGA, Oscar and other with a total street value of over £300.

(PLEASE ADD £40 FOR DTD PACK)

GRAPHICS AND VIDEO

REAL3D 2	£378.50
ART DEPT PRO	£134.99
MORPH PLUS	£136.99
DPRINT 4 AGA	£ 66.00
DPRINT 4	£ 59.99
SCENERY ANIMATOR 4	£ 54.99
VISTA PRO 3	£ 44.99
MAKE PATH	£ 23.99
TEARAFORM	£ 23.99
SCALA MM210	£ P.O.A
SCALA MM300	£ P.O.A

UTILITIES

X-COPY PRO	£ 31.99
GB ROUTE PLUS	£ 32.99
LATTICE C V6.1	£259.99
DIRECTORY OPUS	£ 46.50
VIDEO BACKUP SYSTEM	£ 49.95
QUARTERBACK TOOLS	£ 47.50
DEV PACK 3	£ 53.99
VIDI AMIGA 12	£ 81.95
DISTANT SUNS V4.2	£ 39.99

MUSIC

STEREO MASTER	£ 29.99
BAARS & PIPES PRO	£215.99
TECHNOSOUND TURBO	£ 58.50

WORD PROCESSOR & DTP

WORDWORTH 2	£78.99
FINAL COPY 2	£74.99
PENPAL	£28.95
PAGESETER 3	£43.99
PRO DRAW V3.0	£64.99
PRO PAGE V4.0	£89.99

GAMES

CIVILISATION AGA	£ 39.00
CIVILISATION AGA UPGRADE	£ 19.00
(SEND YOUR DISKS AND DETAILS)	

PRINTERS

CITIZEN	
CITIZEN 240	£212.00
CITIZEN 240C	£234.00
PANASONIC	
KXP 2123 COLOUR	£210.00
KXP 2023	£178.00
HEWLETT PACKARD	
HP 500C	£290.00
HP 510	£246.00
HP 550C	£490.00

DEMON



OVERDRIVE 35

These external hard drives come in an ABS box styled to match the Amiga A1200. They plug in via the PCMCIA slot and include an external PSU so as not to invalidate your Commodore warranty. Ultra fast transfer rates of up to 2Mb/sec. Full 1 year warranty, all the software needed to mount and configure the drive is included.

30Mb version - £299	340Mb version - £549
60Mb version - £349	426Mb version - £549
50Mb version - £399	540Mb version - £699

A1200 UPGRADES

SCSI/RAM BOARD

This board is user fittable via the trapdoor expansion slot of the A1200. It has slots for up to 1Mb of 32bit RAM, a maths co-pro and includes a SCSI interface as standard.

1Mb / NO FPU	£179.00
1Mb RAM/33MHz FPU	£349.00
1Mb RAM/33MHz FPU	£ 59.00

A1230 BOARD

Another quality trapdoor expansion for the A1200. It features a 68030 processor as standard and has slots for a maths co-pro and up to 8Mb 32bit RAM.

1Mb / NO FPU	£269.00
1Mb RAM/40MHz FPU	£439.00

ACCESSORIES

3MHz 68882 FPU	£ 99.00
3MHz 68882 FPU	£129.00
1Mb 32bit RAM	£ 64.00
1Mb 32bit RAM	£153.00

RAM BOARD

This budget expansion board fits via the trapdoor. It has 2x32bit SIMM sockets for up to 8Mb of memory, a 16MHz 68881 FPU, and a battery backed clock fitted as standard.

with 0Mb RAM/68881	£ 99.00
with 1Mb RAM/68881	£129.00
with 4Mb RAM/68881	£229.00

IDE INTERNAL HARD DRIVE KITS

These kits come complete with screws, instructions and all the software necessary to prep and configure the drive.

40Mb - £139	60Mb - £119	80Mb - £179
120Mb - £279	209Mb - £399	

A4000 UPGRADES

PHOTON (FOR A4000/030)

This board will transform an Amiga A4000/030 into a fully fledged 040. It features a 040 CPU module with a MMU and a built-in FPU running at 25MHz. PHOTON UPGRADE £699

HELLFIRE (FOR A4000/030)

This is a replacement CPU board for the A4000/030. It features a 50 MHz clock speed, a built-in MMU and a 50 MHz 68882 FPU. Your 030 will only be 10% slower than an 040 during most operations.

HELLFIRE UPGRADE £299

DHB 128

The DHB 128 is a 0 wait state memory expansion board for the A4000 series. It has slots for up to 128Mb of 32bit RAM using SIMMS of any size. It is a true ZORRO 3 card which makes for a very fast board.

DHB BOARD (BLANK) £269 (See chips for memory)

HARD DRIVES (A1200 & A4000)

These Hard Drives can be fitted at any time by us (FOR THE A1200) or the end-user. All the necessary software is included.

85Mb - £129.00	330Mb - £299.00
130Mb - £149.00	426Mb - £369.00
200Mb - £199.00	540Mb - £399.00
250Mb - £249.00	

FITTING FEE FOR A1200 £ 29.00

CHIPS

1Mb SIMM	£ 39.00
4Mb SIMM	£134.00
25MHz 68882 FPU	£ 89.00
33MHz 68882 FPU + CRYSTAL	£ 99.00
40MHz 68882 FPU + CRYSTAL	£129.00

CD32 CONSOLE

This machine represents the future in home entertainment and video game play. A self-contained CD console which you can expand into a full CD based home computer. CD32 comes complete with two stunning AGA games.

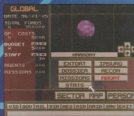
ALL FOR JUST £279

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(0736) 331039

The Ultimate Planetary War Game that mirrors real life,
yet lets players escape to worlds only dreamed of...



-
- A screenshot from the game 'The Sims' showing a house with a swimming pool and a car. The game interface is visible, including the 'CORRECT' button and the 'SIMS' menu.

MAELSTROM IS NOT FOR THE FAINT-HEARTED. WHEN YOU LOSE - YOU DIE...

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MEDIAPOINT

Aimed squarely as competition for *Scala*, *MediaPoint* does pretty well for itself. It was written by the same people who brought us *Real 3D*, and received a strong review in the January 1994 issue.

As *Scala*, it uses the same sort of pinky-lilac screen with point and click event bars. Animations, sound and *ARexx* messages can all be produced depending on input or pre-set times. The extensive set of example image and sound files which come with *MediaPoint* will mean you can probably create half a dozen applications before you need to buy a scanner or digitiser. Also like *Scala*, *MediaPoint* is rather expensive and worse still you may find you have to pay a royalty or buy a license to use it on a stand-alone terminal.

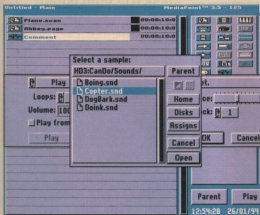
Product: *MediaPoint*

Price: £399.95

Availability: Meridian Software, Tel: 081 543 3500



MediaPoint can cope with AGA pictures, and then overlay its own text and gadget devices. The nice wipes will add a polished finish to any presentation.



Sound modules are supported, although not those created by MED. Thankfully both *MediaPoint* and *MEDPlayer* talk *ARexx*, so all is not lost.



Tele-Date

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Meet your perfect date with the help of our discreet love-match personal database.

"We're so happy" - Sharon and Nigel
"He's my little butterfly" - Sue
"I found love" - The Fatback Band

SCALA

You're probably sick of *Scala*, aren't you? Surely not! I hear you cry. If last month's extravaganza wasn't enough for you, here's a brief re-cap. *Scala* is the multimedia tool that the professionals use. It supports almost everything under the sun, and is in use all over the world. Even IBM use it for their presentations.

If you want to know more, either look at last month's issue, watch cable TV in the States, book into a Danish hotel or buy a McDonalds.

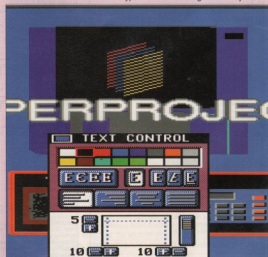
Product: *SCALA MM300*

Price: £329.99

Availability: Scala UK Ltd, Tel: 0920 444294

HYPERBOOK

HyperBook was developed by GoldDisk, who are probably better known for their DTP software rather than their multimedia software. This program manages to combine ease of use with an incredibly powerful *ARexx* interface. The interface is needed because *HyperBook* can't do a great deal by itself -



even the animation support isn't up to much. In its favour is a very low price, an excellent manual and a really classy feel. Unfortunately there are problems using *HyperBook* with Workbench 3 machines, and there is no AGA support. Until some upgrades come along, this is probably one to avoid.

Product: *HyperBook*

Price: Original price £70. However, can now be found in various shops for a lot less.

Availability: Gold Disk, Tel: 0101 416 602400 or shop around in the UK.

AMIGA/PC UTILITIES

Cross Dox / Cross PC	£39.95
Allows you Amiga to emulate a CGA/PC and read and write MS-DOS files	
PC TASK	£39.95
Allows an Amiga to emulate a VGA/EGA/PC, read & write MS-DOS files	

BOOKS Bruce Smith Books

A1200 Insider Guide	£13.95
A1200 Next Steps	£13.95
Assembler Insider Guide	£14.95
A-Z of Workbench	£14.95
Mastering Amiga Amos	£18.95
Mastering Amiga Amos 2	£18.95
Mastering Amiga Beginners	£18.95
Mastering Amiga Printers	£18.95
Mastering Amiga Systems	£28.95
Mastering Amiga Workbench 2	£18.95
Mastering AmigaDOS 3.0 Reference	£20.95
Mastering AmigaDOS 3.0 Tutorial	£20.95
Mastering AmigaDOS 2 Volume 1	£20.95
Mastering AmigaDOS 2 Volume 2	£18.95

DISK UTILITIES

Disk Expander Compresses your hard drive	£29.95
X-Copy Professional	£24.99
Hardware and software install version	
Directory Opus	£49.95
Dir acts - view pictures, play music, hex read file, backup, search	
Gigamem	£51.99
Hypercache	£37.55
Disk caching to speed up hard drives by 22 times. Routines to 320 times	
Quarterback Tools Deluxe	£79.95
Advanced disk utility	
Quarterback v6 Backup and archival system	£59.95
Video Back-up System	£54.95
Backs up floppies and hard drives onto VHS video tapes	

DATABASE

Base Personal 4	£99.95
Forms Designer and fully relational database	
Base Pro 4 v1.3	£199.95
Fully relational database with Database Management Language	

DATABASE APPLICATIONS

GB Route Plus Plan your route anywhere in the UK	£39.95
Mailshot Plus	£39.95
Music Librarian	£19.95
Plants For All Seasons	£19.95

DRIVERS

Stand alone device drivers with hotlinks to ASDG's Art Dept. Professional	
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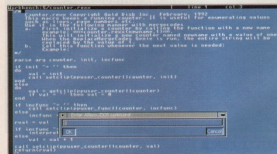
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» AREXX

Believe it or not, but it is possible to write an entire application using AREXX. The only catch is that you'll need standalone programs to display graphics, animations and so on. The good news is that all you require is already written and in the realm of public domain and shareware.

Graphics can be handled with ViewTek, for although VT doesn't itself have an AREXX port (shame) it can be driven from the CLI/Shell, which AREXX is



more than capable of doing. Likewise there are dozens of IFF-sample playback programs around, so linking the entire lot together is only a matter of churning out the relevant AREXX script.

If there is a major problem, it's probably one of speed. AREXX is an interpreted language and therefore not the fastest. It would also be a difficult task indeed to prevent glitches as the various programs are called, and you might find the Workbench display keeps popping to the front – not always a very pleasant experience.

If you don't have an A4000 you will need to invest in a good tutorial work, of which there are now several.

Product: AREXX

Price: free with all new Amigas

Availability: Commodore, Tel: 0628 770088

THANKS TO...

Martin Lowe (Amiga Centre Scotland) for some excellent kit, Andy Leasing (Silica) for keeping us on our toes, Marcus Music and Chris Campbell for MIDI equipment and being the best music shop, Bangor Town Council for not taking legal action... yeh.

COPYRIGHT PROBLEMS!

You might be worried about using a particular sound sample or photograph, but news just in from the States presents a whole new problem: the concept of Multimedia has itself been copyrighted.

The American company Compton's NewMedia has been granted a patent for "a search system in which a multimedia database consisting of text, picture, audio and animated data is searched through multiple graphical and textual entry paths".

In its broadest sense this covers just about everything covered in the last few pages: a truly crazy state of affairs. Compton NewMedia are actually proposing that you pay them to license your multimedia application. Until the big boys such as Microsoft (who produce a help system for Windows that neatly infringes the patent) and their lawyers can talk some sense into the patenting commission, this is what you'll have to do to remain 100% inside the law. Frightening, isn't it? They'll be patenting treating next.

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JARGON BUSTERS

● HYPERTEXT

A hypertext system is one in which clicking on a particular word will bring the user to a definition or more relevant text.

● SCRIPTING LANGUAGE

For fine-tuning, it is important that an application can be editing at the script level. For example, although Compa applications are generated by clicking and dragging, it is also possible to enter commands directly from the keyboard.

● PLAYBACK FROM DISK

Especially when memory is limited, it is useful to be able to play back animations from disk without having to load them all into memory first.

● EXTERNAL HARDWARE SUPPORT

Some systems can control dedicated hardware such as laser disk players or audio CD players.

● MIDI PLAYBACK

For the best possible musical backing, an external synthesiser can be controlled if the software supports MIDI.

Individual programs and features

Program name	CANDO	HELM	MEDIAPOINT	SCALA	HYPERBOOK	AMIGAGUIDE	AMOS	BLITZBASIC 2	LATTICE/SAS C	AREXX
Program type	Multimedia authoring system	Multimedia authoring system	Multimedia authoring system	Multimedia authoring system	Multimedia authoring system	Hypertext system	Programming Language	Programming Language	Programming language	Interprocess communication language
Hypertext support	Yes	Yes	No	No	Yes	Yes	No	No	DIY	No
Graphics support	Yes	Yes	Yes	Yes	Yes	Limited	Yes	Yes	DIY	No
Amiga Sound support	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	DIY	No
MIDI support	No	No	Yes	Yes	No	No	No	No	DIY	No
Animation support	Yes	Yes	Yes	Yes	No	No	Yes	Yes	DIY	No
Animation played from disk	No	No	Yes	Yes	No	No	No	No	DIY	No
AGA graphics	Yes	Yes	Yes	Yes	No	Limited	No - promised	No - promised	DIY	No
External hardware support	No	Yes	Yes	Yes	No	No	No	No	DIY	No
Scripting language	Yes	Yes	Yes	Yes	No	Yes	Yes (BASIC)	Yes (BASIC)	C	Yes
AREXX	Yes	Yes	Yes	Yes	Yes	No	Yes (Pro only)	No	DIY	n/a
Overall Rating	****	****	****	****	***	***	***	****	***	****

(note 1)

(note 2)

Note: Any system that has an AREXX port can (in theory at least) do anything. For example, Cando can call a program that plays animations directly from disk. Of course, this isn't as convenient as a program like MediaPoint which can directly play animations in this way. Note 1: With Lattice/SAS C, you need to write the features yourself. Theoretically, it can do anything.

Note 2: Although AREXX itself cannot display graphics or play sounds, it can ask other programs to do it on its behalf.



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MediaPoint means good looking, fast graphics:

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- Fast color thumbnails in file requester for easy file browsing.

MediaPoint is modular:

- Xapp™ modules for GVP's IV-24, Studio 16 cards, MIDI, CDTV, LaserDisc players, VCRs, still video players. Coming soon: Video Toaster xapp.

MediaPoint is complete:

- Standard bundled languages: English, French, German and Dutch.
- Free runtime player.
- No hardware key protection.

Commodore Info Main Menu

- 1 New Amiga models
- 2 CDTV titles
- 3 Multimedia software
- 4 Other products

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CD32 ZONE

The only place for news and reviews on the CD32

THE END OF SHOVELWARE?



Have you noticed anything different about the CD reviews this issue? Notice how, for the first time, it isn't just CD conversions of existing Amiga floppy disk products?

Glance down this page to the news piece on Stellar Genesis Agency's new game. The big news seems to be that Shovelware is dying, being replaced by genuine CD development. The CD32 seems to be succeeding at speeds that no-one could have expected, as developers start to develop CD32 products in tandem with PC CD-ROM titles. This can only mean good games for the CD32 as developers draw on all the experiences learned from years of PC construction and start to create games that fully utilise the CD, instead of a standard Amiga game with half an hour of music. Amiga conversions won't help the CD32 survive, but developed-for-CD titles will. Three cheers for the flourishing PC CD-ROM market!

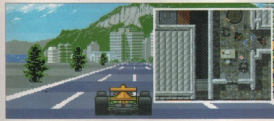
Tony Dillon, Games Editor.

DOUBLE THE FUN

Team 17 are stepping forward to come to the aid of the CD32 owners crying out for the kind of software that will make their console-owning friends weep. Retailing at the staggeringly low price of £24.99 each, the Team 17 CD32 Double Packs contain some of the Team's greatest games, specially adapted to make use of the CD32 joystick. Pack One contains the superb shoot 'em up *Project X*, the game that redesigned blasters and took the attention away from platform games for a little while. Accompanying this is *F17 Challenge*, a budget racer to rival most full-price products.

Pack Two brings you *Alien Breed Special Edition*, a revamped version of the game that made Team 17 the success they are, and *Qwak*, a cute platform title in the mould of *Bubble Bobble* and *Super Methane Brothers*.

Sounds like a bargain? We agree, so get down the shop with the rearies! For more information, call Team 17 on 0924 291867.



RUNNING AMUC

It didn't take long for those over the great pond to catch on, did it? No sooner have 17 Bit released a couple of CDTV and CD32 Public Domain disks, then the Amiga Users Of Calgary get in on the act with *The First AMUC CD*, a collection of public domain art, sounds and programs taken from the *AMUC Express* BBS. Everything from JPEGs to *MED Modules* can be found on here, covering an enormous 610Mb. A bargain at only CD\$20.00 (Canadian Dollars) plus CD\$3.00 for postage and packing. For full information, write to AMUC, PO Box 34230, #19 1200 - 37 St. S.W., Calgary, Alta, T3C 3W2. Tel: (403) 242 5406, remembering to add the international dialling code for Canada.

NEWS

I CAN SEE CLEARLY NOW



A recent survey by the International Federation of the Photographic Industry (IFPI) showed that over 700,000 illegally-printed CDs entered the UK in 1992, showing a dramatic rise in CD piracy as CD mastering units become cheaper and cheaper. Disctronics, Europe's leading independent CD manufacturers have sailed to the rescue with a new, low cost way of printing full colour holograms onto CD, to help customers identify the original product. Says Chief Executive David Mackle: 'In view of the amount of money illegal discs are going to cost legitimate producers, we feel this must be a good, simple and low-cost step towards security. We believe it is the responsibility of the company to provide security features which allow customers to know they are buying the real thing. The other bonus of the system is that it makes the CDs so attractive! For more information, call Disctronics on 081 878 4999.'

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BIRTH OF A STAR

News just in! Mindscape have just signed the rights to a brand new, CD-only product from new development house Stellar Genesis Agency under the working title of *Space Academy*. Being designed and coded by long time programmer John Jones-Steele, with extra design and all visuals supplied by artist Dave Rowe, the game features an isometric, forced perspective view used in a way never before seen. John has already had plenty of experience with isometric views from his numerous conversions of *D-Generation* for Mindscape, and his CD32 coding is second to none. Interestingly enough, as the game is designed for CD, it will use most of the CD. 'We're going to use the CD to store loads of gameplay, rather than cop out with forty minutes of muzak,' explains John. Look out for *Space Academy* this coming Christmas. More news, as and when we get it.



THE ULTIMATE TEAM COMES TO CD32?

More news from Team 17, this month, comes in the form of a brand new *Body Blows* release - *Ultimate Body Blows*. Seriously revamped, the game features no less than 23 characters in total for you to play around with, featuring many of your favourites from the previous two *Body Blows* games. All the graphics are drawn in 256 colours, so it looks stunning, and with some professional 16 track digital soundtracks, it should sound stunning too!

The best thing about it? Absolutely no disk swapping at all! *Ultimate Body Blows* should be released at the end of March for only £29.99! Call Team 17 on 0924 291867 to book your copy!

THE LABYRINTH OF TIME

The CD32's first straight PC adventure conversion looks stunning, but does that hold true for the gameplay? Mark Patterson finds out.

With many of us, including me, still waiting to be really impressed by the CD32, I was keeping my fingers crossed that this would be the game to do it. I'd seen pics of the PC version and as this is supposed to be a direct port I was holding out for something special.

I didn't get off to a good start though. On the box it says it's compatible with all Amigas, including CDTV and 1Mb machines with a CD drive. I'm offended, this seems to be a lie as - my poor old CDTV seized up at the first sniff of this game and, in fact, the only machine it will run on is the CD32. Which is not surprising when you look at the graphics.

A-MAZING

The game's plot is a little bizarre, and is probably the produce of too many late nights and one too many, er, coffees. Daedalus, the bloke who

All of the 1800 images in the game have been raytraced.

designed the original *Labyrinth* for king Minos to hide his half-bull son from the clutches of the evil Ronaldium McDonaldus, has made a comeback. Being a bit of a clever brick, Daedalus' latest creation spans space-time to encompass all kinds of weird dimensions. Once it was completed he decided to try it out by popping over to our reality, kidnapping a junior accountant from 915 Luton to Kings Cross and dumping him right in his maze.

He then proceeded to tell his bewildered and slightly travel sick captive that his only chance of escaping was to find the secret of the maze and destroy it.

As a PC CD-ROM conversion this

is perfect, but then I didn't expect anything less. The 256-colour graphics are stunning, easily the best seen in an Amiga adventure. I don't know if it's my eyes packing in after staring at high-radiation Mac monitors for so long, but I swear the graphics flicker, not as bad as the Amiga in HAM mode, but there's a noticeable twitch there all the same. But what really wound me up was the lack of action. Here you have all these lovely static screens, but with nothing happening on them. Once in a while a door might open, you encounter Daedalus who does a great Captain Scarlet impression as he waves his arms around,

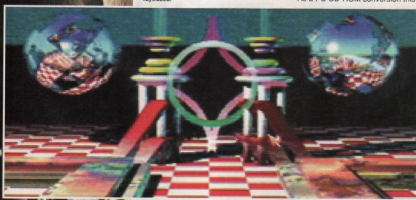


As you can see, the *Labyrinth* itself has been considerably updated.

but for the most part you're just looking at pretty pictures.

The CD32 is also a bit slow when it comes to accessing the graphics. Rather than show a transition between two locations, you have to wait a couple of seconds for the next screen to be loaded in. I mean, a little bit of animation as you walked down a corridor would have made a big difference. It can be very annoying when you've got to go through several locations in quick succession you wait for each one to be loaded in individually. Still, the screens are nice though...

For all its visual excellence, *Labyrinth*'s playability has all the attraction of a decomposed corpse after a two-week swim in the Thames. The gameplay is quite loose, letting you travel to loads of locations without having to actually tick your brain into gear. When you decide to actually stop gawping at the graphics and start



NOW WHERE'D MY MAP GO?

Life can be confusing in the *Labyrinth*, and a little scary too for the weak-bladdered. Here's a taster of life on the other side...



There you were, standing on platform four at Kings Cross, when all of a sudden, wham! Some 3000 year-old Greek geezer grabs you by throat and whisks you off to his maze.



See the clown? Scary, isn't he? However, all the atmosphere's ruined by the completely rubbish digitised laughter he emits. You'll definitely turn the volume down when you hear it.

thinking about escaping from the Labyrinth, you find out just how weak the gameplay really is.

TRY AND TRY AGAIN

Puzzle solving is a simple case of trial and error. Which key fits which door? Will Object A release Object B so I can get through this door to solve even more similar puzzles? As the game contains somewhere in the region of 280 screens, it can take a fair while to solve even the most rudimentary problem, leaving you time to count the number of steps backwards the Labyrinth's programmers have taken when compared to recent games.

This is hindered further by the lack of a decent user-interface]. You've only got a few rudimentary commands at your disposal, such as pick up and drop, which severely limits the ways you can try and solve puzzles.

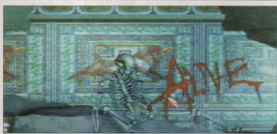
I don't want to rant, but old-fashioned text interface adventures offered far more scope for gameplay than this. And now with the trend for interactive characters and backdrops in games like Indiana Jones and most Sierra adventures, Labyrinth seems pathetically inadequate.

WHICH WAY NOW?

The real challenge behind the game is escaping from the labyrinth, which is quite a feat considering its size. Normally this would involve several yards of graph paper, a few pencils and an eraser, but for some strange reason the programmers have decided to include an auto-map fea-



(Top) Even gigantic hairy minotaurs need to have a few home comforts, although this kind of set up is a little rudimentary for my tastes. (Left) All through the game you can meet friendly characters like this, who will probably drop the object you were looking for when you kill them.



ture. I'm the first to admit that it's far more practical, especially for someone like me who's writing has to be read within four hours or be forever illegible, but it does seem to defeat the object of the game slightly. Every time you enter a new location the

map is updated, so it's almost impossible to get lost. Combine that with the rather rudimentary puzzle solving and you get the impression that

One of the more impressive looking locations in the game.

completing the game is matter of persistence over real adventuring skill.

If companies are going to do direct PC to CD32 conversions, why don't they choose good games? The forthcoming CD32 version of Simon The Sorcerer promises to be a significant event in Compact Disc adventures, but in the meantime I wouldn't say no to conversions of excellent PC titles like *Sam And Max* and *Day Of The Tentacle*.

Don't be taken in by the pretty graphics and the promise of PC-style adventuring. *Labyrinth Of Time* may be like my milkman, slow, crusty and rarely delivers, but if you're an adventure-starved CD32 owner with cash to burn, you might want to overlook the faults, in which case you get a passable, if not that challenging, slice of surreal role-playing. **CU**

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RELEASE DATE:	OUT NOW
GENRE:	ADVENTURE
TEAM:	IN HOUSE
CONTROLS:	JOYPAD
NUMBER OF DISKS:	1
NUMBER OF PLAYERS:	1
HARD DISK INSTALLABLE:	NO
MEMORY:	1Mb

GRAPHICS	*****95%
SOUND	*****85%
LASTABILITY	*****64%
PLAYABILITY	*****73%

"A significant release for the CD32. Shame it's not very good."

OVERALL 69%



Explore a bit further and you'll find yourself in a mirror maze. This is obviously the section where the artists were a bit bored, as most of the screens look the same. What a rip-off.



You're making some progress now, there's just another 275 screens to go. It's worth sticking with at as the graphics later on are just totally amazing.

When you encounter an alien, this is what you see - not much. Apart from being unrecognisable as any form of life form, there's also precious little animation.



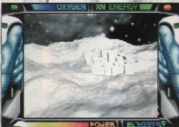
PREY

» **ALMATHERA OUT NOW £19.99**

Now here's a game which gave me a jolly laugh - about ten million years ago on the CDTV. It's set inside an abandoned mining ship where the occupants have all been devoured by aliens. Sounds familiar? Damn right.

Into this alien environment comes you, a puzzle-solvin' xenomorph-zappin' desperado. That's the idea. Sadly something's gone wrong in the execution. The gameplay has you trudging through miles of deserted corridors, tracking down fresh oxygen supplies for your environment suit and frequently being killed. When you do encounter an alien the result is a rather disappointing combat scene where you attempt to duck the alien's feeble attacks while trying to fill it with bullets.

The action is accompanied by heavy breathing noises, which is supposed to be you in your suit, but instead sounds like something which could get you arrested. This is matched by the graphics which, bar a few nice effects, are painfully dull. Don't expect to see much of the



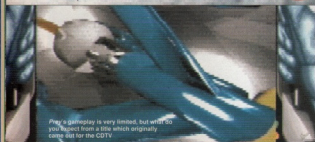
The game features a nice fractal intro, but the same quality of graphics fail to appear in the game.

aliens either, when one appears your suit switches to 'thermal' mode, which basically means you get a cruddy, at-formid pic of what should have been a well-drawn alien.

What makes this a thousand times worse is the thought that this isn't actually a CD32 game, it's merely a CDTV title with different packaging and a fractal intro. And when you compare the two machines it's like someone suggestion you hook up their dodgy mobile home to the back of your Bentley. Things like that are just not on and neither is this game.

Mark Patterson

45%



Prey's gameplay is very limited, but what do you expect from a title which originally came out for the CDTV

PIRATES GOLD

These graphics look nice enough when they're not moving, but as soon as they start animating you realise the artist was supremely untalented.



MICROPROSE OUT NOW £24.99



This is what happens when you take Elite, strip out all the hi-tech gadgetry and set it in the 18th century Caribbean. You start off as a wannabe pirate with a little boat of your own, several thousand miles of ocean and a couple of sailors who've tagged along for a laugh.

Right from the start you're on your own. There are plenty of careers to embark on, from out and out brigandage to attacking outposts and innocent towns. This freedom to basically do what you want is the game's strongest feature. You're not constrained by plots so you're free to progress, by bigger ships and hire bigger crews.

Before you take to the seas with your crew of salty sailors you need to pay a visit to the docks. This isn't as suspicious as it first seems. Here you can buy an amnesty from the king, who'll promise he won't send out any more fleets to sink you, or sign up as a privateer - a part-time member of his fleet.

One-on-one combat forms an integral part of the game, unfortunately it's not very good. When you've selected your weapon, rapier, sword, cutlass, but no guns, you're treated to what at first seems to be a graphically excellent combat

section. That is until the characters start moving, at which point the ludicrously unconvincing animation ruins any sense of realism, as does the gameplay which requires you to stab your foe at least five times to kill him.

On a larger scale, no matter how cautious you are, you'll always end

The lower-deck tavern with interest as you discover the game's



Price £25.99 better to continue

Most of your business is carried out on a rather suspicious basis in the local pub. Here you recruit crew and hear tales of daring deeds and urine drinking on the high seas.

up in a naval conflict. Here you get a top-down view of the combat area which contains tiny graphics of the ships. Looking at this, and the fact that the game's on CD so there's no memory problems, I can't help but think more could have been done here.

Pirates Gold is a nice concept which plumps of good ideas. Unfortunately it doesn't deliver the goods.

Mark Patterson

64%



This may look a bit like Monkey Island, but isn't, being neither funny nor playable.

WIN AN OVERDRIVE

To celebrate the phenomenal success of their Overdrive hard drives for the A1200 and A600, those incredibly generous people at Software Demon have thoughtfully offered us 10 drives worth over £2,500 to offer to you, our lovely readers, as competition prizes.

First prize is a massive 540Mb capacity Overdrive 35 – big enough to run your own bulletin board! Second prize is a 426Mb drive, third prize is a 340Mb unit and there are seven runners up prizes of 130Mb drives!

To stand a chance to win one of these drives, all you have to do is answer a few simple questions. Once you've worked out the answers, write them on the back of a postcard along with your name and address and then send the whole shebang off to:

**OVERDRIVE COMPO,
CU AMIGA, Priory Court, 30-32 Farringdon
Lane, London, EC1R 3AU.**

Here are the questions:

- How many bits are in a megabyte?
a) 8388608
b) 8192
c) neither of the above
- What is the predominant colour of Software Demon's Overdrive advert?
a) Greenish, blue
b) Brownish, gold
c) Yellowish, purple
- Which company manufactures Overdrive?
a) Archos
b) Archaos
c) Anarchos
- CU AMIGA first previewed the Overdrive in which issue of the mag?
a) January 1994
b) August 1993
c) October 1993
- Which of the following items do Software Demon NOT advertise?
a) Amiga 4000s
b) Vista Pro
c) ZX Spectrums

Well that's it. Easy weren't they? Honestly we're just too good to you sometimes!

The closing date of the compo is March 31st 1994, so get scribbling!

RULES

- The Editor's decision is final.
- No correspondence will be entered into.
- Closing date for all entries is March 31st, 1994.
- This competition is not open to any employees of EMAP Images or Software Demos.
- All answers on a postcard please or a recycled Christmas/Birthday card if you want to save the world.





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ADDER PAPER (M10)	11.99	ISAR 2	11.49	ELITE	13.99	A-TRAIN	13.99	COMBAT CLASSICS	13.99	JURASSIC PARK	17.99	BOY BLOWZ	12.49	ZOOZ	10.99	SPORTS MASTERS	13.99	D MASTER + CHAOS	13.99	8 OF MONEY ISL	12.99
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To celebrate the release of this strategic milestone, Empire have kindly donated no less than five copies of *Campaign 2* – the 81%-scoring combat simulator to go to five of our most fortunate readers.

Not only that, but we also have five stunning Tamiya model tanks to give away! These super high-quality kits are as detailed as the real thing, and their easy but intricate design means you'll have just as much fun piecing them together as you will admiring them afterwards.

There are five completely different tanks to win, from an M3 Bradley to a Challenger, and even a mighty Kampfpanzer Leopard. All these tanks are featured in *Campaign 2*, and could be found in your living room if you can answer the following question correctly.

What is the name of the third movie in Oliver Stone's famous war trilogy?

That shouldn't tax your brains too much. All you need to do now is scribble that down on the back of a postcard and send it to: "War? No Tanks," CU AMIGA, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU. All entries to be in by March 31st, 1994.

RULES OF THE EMPIRE

1. This competition is open to absolutely everyone, provided they don't work for EMAP Images or Empire. Oh, it helps if they have an Amiga too.
2. The Editor's decision is final and no correspondence will be entered into. We just can't afford the stamps, you see.
3. The closing date for all entries is 31st of March 1994.
4. Did you know that you don't need a chequebook to write a cheque?
5. It's true. You could write it on an elephant if you want.
6. And the shop would have to take it. My mate tried it once...



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SCREEN SCENE

Turn up the colour contrast on your monitor, boost up the stereo sound and prepare to plug into the most revealing, witty, informative, critical and downright marvelous Amiga game review section in this entire magazine.

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- 96 VAMPYRA

A CU Screen Star is for games scoring 85%-92%. If a game gets one of these, it's of lasting quality and you can rest assured that, if you decide to purchase it, you won't be wasting your money.



93% and a game's worth a Superstar. We hardly throw them around, but if a game gets one it's be completely outstanding.



'How do you see so far into the future?' the readers cry. 'With the aid of the CU AMIGA crystal ball,' we reply adjusting our headscarves and gold hoop earrings

BUBBLE AND SQUEAK

AUDIOGENIC

THE GAMEPLAY: Bubble is a small boy, who looks a little like Charlie Brown. His friend, Squeak, is a small, friendly but slightly stupid dragon. Together they have to, well, run around very large screens solving puzzles and collecting gems. Bubble can ride on Squeak's back to reach some inaccessible areas, or kick Squeak around the screen to reach others.



WHAT'S NEW: The versatility. By having two characters with completely different abilities, Audiogenic have managed to come up with

some of the most fiendish puzzles yet, with the whole thing held together with the sweetest characters since Robocod learned to wiggle while he walks. An intelligent control method means that the fire button can be used in a variety of different ways, depending on where you are and which object you're facing at which time.



BEHIND THE SCENES: The whole thing has been coded in-house by Audiogenic, by the same team who pieced together the impressive Graham Gooch's Test Cricket. FIRST IMPRESSIONS: Extremely good. With a couple of very playable levels under our belts, we can safely say that Bubble And Squeak is shaping up to be one of the best Amiga platform games ever.

Amazing graphics, mixed with some infuriatingly addictive puzzles will send this game to number one and keep it there. Look out for a full review next issue.

NAUGHTY ONES



KOMPART

THE GAMEPLAY: Naughty Ones is a good platformer with lots of action and a cute but cool hero who, sporting shades, runs, jumps and bounces throughout the five different levels of psychopathic robots, firing stars and undead mummies. A handy arrow tells you in which order you need to kill the enemies with your feeble little pellet gun, and icons scattered about in all sorts of inaccessible places. Two players can share the work, making for double the fun.

WHAT'S NEW: The expanding map. As you progress through the game, all the exits to the previous screens remain open, so you can go back and cover old ground at any point.

FIRST IMPRESSIONS

ON THE BALL

ASCEN

THE GAMEPLAY: It's a football management game, as if you couldn't tell by the screenshots. You take your team, train them up, sort out their tactics and then get them out onto the pitch and up to the top of the league. As information friendly as they come, everything you could possibly need to know is displayed in front of you, as you race for the top!

WHAT'S NEW: The gorgeous in-match graphics, for a start. A whole series of watercolour illustrations were created, and then scanned in and touched up. The result is some stunning animation. Other than that, you can try out some brand new tactics (feigned injuries?), perform TV interviews, bribe players and do all the other things that managers do.

BEHIND THE SCENES: German team Ascon are the lads and lasses



behind this one, and if their previous title – *The Patrician* – is anything to go by, then the year or so spent developing *On The Ball* should pay off quite nicely.

FIRST IMPRESSIONS: Surprisingly good. *On The Ball* looks set to revolutionise football management, as a wealth of new ideas and fresh approaches set it up to be a huge release. The proof of the pudding is in the playing, and some of the subtler options could well be the key to this game's success. We'll have a full review soon.



Naughty Ones looks like being a good old-fashioned two-player platform game.

This allows for a maze-like element to creep into many of the levels.

BEHIND THE SCENES: The game has been coded by the Danish company Interactivision who were responsible for our extremely popular coverdisk *Interword*. *Naughty Ones* is their first real arcade game.

FIRST IMPRESSIONS: Good little game. The graphics are very colourful and full of character, giving the whole game that just one more 'go' look. The playable levels we've seen so far are very good, so it all bodes well for Interactivision. We'll be reviewing *Naughty Ones* in our very next issue.



TURBO TRAX

ARCANE

THE GAMEPLAY: As you can tell from the screenshots on this page, it's a top view, multi-directional scrolling racer, in the mould of *Overdrive* and *Micro Machines*. Race against three computer opponents at once over three different terrains (cities, off road courses and ice) or try out your speed skills in the time trials. There are four different types of car for you to race, and more challenges than seem feasible!

WHAT'S NEW: Not a huge amount, really. On paper, *Turbo Trax* isn't doing a lot that hasn't

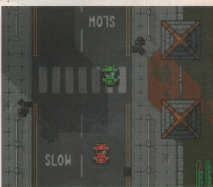
been seen in other games, but it does look like it's going to do it all a lot better. One nice feature is the inclusion of an indicator that hovers in front of the car and tells you which direction the next bend will be in – useful for when you're learning the course!

BEHIND THE SCENES:

Arcane Software have been working on other people's games for over two years, having work included in titles like *Syndicate*, *Birds Of Prey* and *Powermonger*. *Turbo*

Trax is their first game as an independent developer and publisher, made up of MD Steve Iles, graphic artist Mark Wortham and main coder Andy Coates.

FIRST IMPRESSIONS: I loved *Overdrive*, so if this is even better (as I am promised it is), then I can't wait. I've always been a fan of this type of game, and the glut that has appeared recently (*Skidmarks*, *Micro Machines* etc) is doing nothing to quench my thirst for more. Roll on next month, when we can show you more of this little number!





WIP

K240

Graham Ing and his merry men have been beavering away on the sequel to the smash hit *Utopia*. Tony Dillon enjoys some BR coffee and gets the whole story.

Sheffield is in a bit of a state at the moment. The centre of the city has been turned into one gigantic one-way system as the local council dig up the roads with a view of putting in a new tram system. The Town Planners must be having a field day, obviously employing the planning talents they've developed from playing *Utopia* for hours on end. At least, that's what I thought as I tried to work around the backstreets of the ex-steel capital of Britain in search of an exclusive look at Gremlin's next success story, K240. I sat down with designer and coder, Graham Ing, in the battlefield that is Gremlin's new wing (the builders are in, say no more), to find out exactly what K240 is.

Graham explains: 'It's a big military strategy game. Basically, you are

based on an asteroid, having just arrived in a sector of space (Sector K240, for those who were wondering what the unusual name was all about), which you know nothing about. Your brief is two-fold: the first is to grab as much raw ore off all the asteroids in the sector as you can to take back to Earth and make loads of money. Secondly, somewhere in there is an alien, who is trying to do the same thing, so clearly one of you has to wipe the other one out. Let's face it, it's plain xenophobia!'

Graham has already had considerable success with *Utopia*, a game that for many took *Populous* to a new level. *Utopia 2* would have been too easy, and if they had gone for more of the same, would the world have been happy? So what exactly were Gremlin after? 'Really what we wanted when we set out to do this game was flexibility. There's no one way to win the game. You've got lots of things at your disposal, and it's up to you which path you take. You start with a single asteroid with a tiny sensor range and nothing else. From there you've got to work miracles.'

'It's been in development, on and off, for nearly two years. The specification initially was

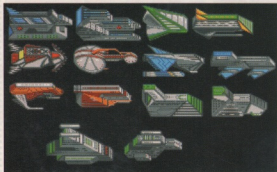
immense. I just sat down and designed it all. Since then it has all been rectified and redesigned - for example, the section I'm

putting in at the moment is totally new, only designed a couple of days ago. It really is a case of us playing it as we go along, saying, "Oh that's not quite right" or "That's got to be changed", trying to get it as flexible and as fun as we can!'

If you've already looked over our incredible coverdisk, you might have some idea about what the game is

like. Mr. Ing and colleagues had a fairly hard time defining what the game was going to be.

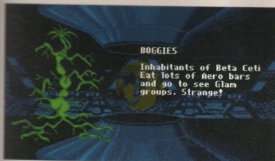
'The original brief was completely open ended. Essentially it was "Let's have a good military, strategic space game." Very soon, literally days after, came the concept of the asteroids. That's been in there all along. We thought it would be quite a different thing to do, with all these asteroids - and there are a lot of them out there - all hurtling about in different directions at different speeds, coming in and out of your sensor range and colliding with each other. Later on in the game, you can actually plonk engines on the things and steer them around. The concept of asteroids is also useful because you've got such a limited area. The asteroids are quite small, so you have to be more



You might only start out with a rather humble looking spacecraft, but build up your asteroid, get yourself a space yard, and you can build ships like these.



Left and above: Being a bit of an intergalactic space feast, K240 is going to be stuffed to the gills with loads and loads of different space ships. The graphic artists have already produced numerous sequences of space ship sprites, both in flight, (left) and as they will look on some of the menu screens (above).



No prizes for guessing what these are. And there are another six alien types to come across in later stages in the game too.

strategic about what you're actually putting on them," says Graham.

So you're space trading. That to some people might seem enough. After all, if you're going to spend all your time making sure that you aren't smashing into other floating pieces of rock while mining like a right one, how much more time do you need to *do*? Graham is confident that you'll need at least three pairs of hands and a multi-tasking brain.

He adds: "The game also contains a fully working colony simulation. Not only do you have to mine ore from the asteroids, you've also got to keep

your colony going by managing a whole series of resources. It sounds a little complicated, but when you get into it you'll find that, although we've spent a very long time getting the simulation just right, the actual player interface is quite straightforward. It's not as if you have to worry about two million things at once. Essentially you've got Power, Air, Fuel and Water, which you have

to make sure you generate enough of. You are shown your production, usage and surplus, and as long as you make sure that your production is higher than your surplus, you'll be alright. There are other things to watch out for, of course, such as population control, radiation control, security and other aspects, generally more and more as time goes on. You've got a selection of buildings to build with - over 40 in the entire game, all of which do different things for your colonies. Obviously the more money you have, the more buildings you have access to, although the bigger buildings do take time to create."

With all this going on, Graham is confident that everyone will be able to play the game with a minimum of fuss. He says: "We've gone for a completely customizable interface. It's

all very well working through the hierarchy to find the options you want, but if you are using an option a lot, you can extract the button and keep it out on the main screen. We've got several time saving features in the game to make it easier to play. For example, in a position where you want to place a big building down and it isn't particularly clear from the view where you can place it, there's a tactical mode which allows you to see where all the spaces are."

Ah, so you do have to build! The game isn't that different from *Utopia*, is it? Well, perhaps just a bit. "Initially in the game you have very little money, which quickly runs out. Just dropping down a few buildings, quickly eats up your savings, so you have to start mining fast. Once you've made some useful amounts of money, you can start to buy plans and equipment from a company called Sytech."

At the start of the game, there are only three different types of ship that you can build. Some you can then

buy from Sytech, and others can only be built from huge space docks, because they're so huge. Typically you'll start with a small ship, which you can then customise with a whole series of weapons. Ships can then be grouped into fleets and used to defend your asteroid or go and attack others in the vicinity."

Why would you want to go out fighting? Because of the standard alien content, of course, and K240 is full of it.

"There are six different aliens in the game, each one has a different set of tactics and they range from easy through to extremely hard. Eventually, when the game is finished, you'll have to get hold of spies and send them over to the enemy asteroid before you can go and have a look. Once you've sent a spy over there, it will send you reports of what's actually happening and what it thinks they are doing. To make it that little bit easier, it isn't always a hundred percent accurate. For example, you might have your spy sitting in orbit when it suddenly tells you that the alien has launched a fleet. Now, that might be accurate, but you still have to interrogate it and ask it for more information such as where is the fleet headed. If it tells you, and you then rush to that asteroid, you might find that it was completely wrong and you lose one of your undefended bases, so you'll have to be a little careful there," he concludes.

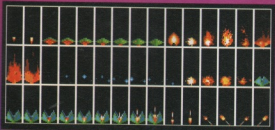
After only a couple of hours, I seem to be getting the hang of it. This game looks like it'll take some playing before you fully master the sector, but will it be as much fun as it promises to be? We'll have a full review, soon. **20**



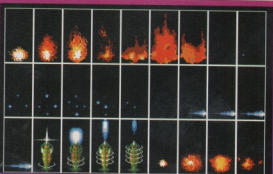
The intro sequence of Kt40 is absolutely stunning. Here is just a taster of what's to come.



The development of Kt40 has resulted in a lot of experimentation with various types of window. Here is just one of the different permutations that were tried.



Above and right: There's tons of explosive power in Kt40, which means of course that there has been lots of playing around with the different graphic presentations of the detonating sprites.



SIM CITY 2000



WIP

City planners have been anticipating this one for ages. Tony Dillon treks across the heart of Wales to take a sneak look at Maxis' latest Software creation.

Ever since it made an appearance on Channel 4's *Equinox*, programme, Amiga and PC owners have been waiting for Maxis' *Sim City 2000* with their tongues somewhere around the region of their ankles. It's promised to be bigger and better than any of Maxis' games to date, and looking at the Macintosh version, I have to say that it's been well worth the wait so far.

Aberystwyth-based coder John Jones-Steele is the man responsible for converting this enormous game. His aim is simple – get the game as close to the Mac version as possible.

It's basically the same as *Sim City*, only with lots of nice refinements, begins Mr Jones-Steele. 'There are a lot of things in *Sim City 2000* that weren't in *Sim City*, that meant you couldn't really simulate a city in its entirety. Things like water and plumbing were missing before. Disasters are better this time around, fires, for example, work more realistically than before. The whole transport system has been revamped as well. You no longer just lay down a track and let trains run up and down it – now you've got to have a terminus at each end. Same with buses. In fact, you can have a combined transport system now, so roads and rail interact properly. There's just a lot more there, now. You can build much bigger cities, and actually model cities now. If you know how your local town is laid



You can call up information on your *Sim City 2000* at any point in the proceedings.

out, you can actually build a town that's pretty similar to it and see what's going wrong, if anything is, and how you can change it.'

The first thing I needed to do was to get all the text and pictures from the Mac, John continues. 'There were basically two ways I could have done it. The first, which would have



Just some of the menus lifted from the resource files. There are quite a lot of them really aren't there?

taken the longest, was to just get all the resources direct from Maxis. Instead of doing that, I just pulled all the resource files out of the Macintosh version, loaded them into the Amiga, and then ran a conversion program I've written to turn Macintosh pictures into PC LBMs, and then rebuilt the resource file from that. The nice way of working like this is that when we come to do German and other language versions, all we need to do is pull the resource file from the Mac, convert it and drop it back in.'

What will surprise most people is the little time it has taken to actually convert *Sim City 2000*. I saw it after two months work, and at this stage there is only a couple more weeks' work needed.

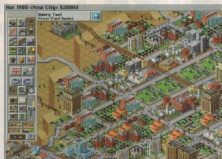
For my part, the reason this has taken so little time to convert is that it is written in C, rather than C++. *Sim Life* was written in C++, and at the

Left: A far view of your enormous (and apparently very happy) city.



There are more graphics and charts here than there are in the Open University.

One of the closest views of your city. In this mode, you can view everything from traffic to structural damage.



time there weren't any good Amiga C++ compilers, and it took absolutely ages to convert. Also, the Macintosh messaging system is similar to the Amiga, only more primitive. It's relatively easy to take anything written for the Mac and convert it to the Amiga," says John.

So what else needs to be done, John? The only things I'm waiting on now are the PC MIDI files, which I'll convert into tracker modules. It's the only part of the game I can't take from the Mac version, as the sound in the Mac leaves a lot to be desired.

One thing that has seemed to bother some people up to this point is that Maxis' simulations are getting a bit, well, serious. *Sim City* was a lot of fun. But *Sim Life* and *Sim Earth*

could be a bit unwieldy at times. Will *Sim City 2000* be a game or a toy? It's a bit of both. Where *Sim Life* was very much a Software Toy, this is both. You can play it on different levels. You can play it as a game, where you have a specific objective, such as trying to rebuild the city in five years after a major earthquake, or you can run it as a toy and do whatever you want with it, rebuilding a city over a hundred and fifty years if you like. You've got things in there like monsters coming down from outer space and invading your city, which isn't exactly a real-life situation, except in Hollywood.

CU AMIGA will have a full review of what looks like being a modern classic soon. Be prepared.

A HISTORY AND A HALF

John Maxis Steele is one of the longest running and successful programmers in the software industry today, despite keeping himself more or less well out of the limelight. With a CV covering more pages than I could read in one sitting, John has been programming games for the last 14 years, the first few of those being taken up with running Aberyst, an 8-bit software house based in his current home town of Aberystwyth. Although we just don't have the space to list every game he's ever written, here is the complete run down of his 16-bit career.

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The weather's been cooler than Prince Charles lately, so what better time for Rik Skews to look at *Winter Olympics*, a game based entirely on sports played in such chilly some conditions.

WINTER OLYMPICS

Strike me with a brick, was it really ten years ago that Summer Games, the first of Epyx's classic games series appeared? Amazingly enough it is. And although a heck of a lot of computer software has flowed down the river of time since, the basic format of these sports-based games has remained much the same.

This year it was the turn of Lillehammer in Norway to host the 27th Olympic Winter Games. So what's the game all about then? You (and up to three friends if you've got them) can compete against each other (the different players are represented by different competing countries) as well as, or with up to 15 spirited computer opponents. There's 14 disciplines, covering six Olympic winter sports: these being alpine, bobsleigh, luge, biathlon, short track speed skating and ski jumping. And you choose up to four of them at any one time (the biathlon is always included).

Clearly the first thing that Winter Olympics has going for it is that there's no figure skating event, the bane of the Epyx product, while the included opening and closing ceremonies turn up the atmosphere no

This is what it's all about, getting a medal.

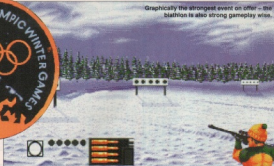
end. Sadly, all the games – apart from short track speed skating – are one-player only which takes some bite out of the game-play. After all, all the good things in life are best done with a partner, eh?!



GOLDEN MOULDIES

The earliest recorded date given for the first Olympics is 776BC, although historians, being the knowledgeable people they are, believe the games began well before then. Staged during midsummer at Olympia, (with The Grateful Dead supporting no doubt) the festival became a regularly scheduled event during the pre-Christian golden age of Greece. The Games were held in honour of Zeus, the most important God in ancient Greek mythology and all wars would cease during the contests. There must have been a lot of bored people however, because records suggest that the first Olympics boasted only one event, a 200ys (163m) foot race.

Graphically the strongest event on offer – the biathlon is also strong gameplay wise.



INTRODUCING...

So just what are the sports on offer? Ladies and Gentlemen, in no particular order, may I present them. Biathlon is a combined sport of cross-country skiing and rifle shooting and takes the form of a link event (just as it did in the Epyx game) between the other sports. Movement of the athlete is achieved by simply moving the joystick left and right in a regular rhythm while shooting is achieved by, you guessed it, moving the cursor over the target and slap-

ping that fire button. This is perhaps the strongest event on offer here. Ignore the boring walking section and wait until you've reached the targets. The graphics here are

Walking to the biathlon requires rhythmic joystick movements, not just frantic wagging. very good, particularly the view through the viewfinder. The gun handles very well, with a lovely weighted feeling. Pleasing stuff indeed. The downhill track is based on what is apparently one of the world's toughest downhill courses. The winner is whoever completes the course in the fastest time after just one run. Miss a gate and you'll be disqualified. However, you can continue to complete the course but no result will be given. Hitting the trackside obstacles is not advised unless you want to become a permanent Christmas tree fixture. Control here (as with all the Alpine disciplines) is achieved by moving the skier left and right, while pressing up tucks the skier, speeding him up in the process, while holding the joystick down brakes him.

The futuristically named super-g is up next. Another alpine event, this is set on a somewhat shorter track than that used for the downhill. Again the winner is decided after one run.





The downhill event is the worst on offer. And yes it really is as slow as it looks. While each event is loaded you're treated to a great picture depicting the event.

THE SUN NEVER SHINES IN NORWAY

Apart from having a fairly decent footy team the Norwegians aren't exactly famous for much are they? Okay, so if this was 1988 then A-ha could safely be added to the list but the only other things we could think of was that they tend to say "moooo" quite a lot and all their cars are called "Fjords". Probably. The accompanying souvenir brochure of Winter Olympics doesn't go a long way to changing our opinion of the Norwegians as it describes the region's favourite leisure pursuits as swimming, angling and swimming. The Norwegians, they're a bit boring aren't they?

The giant slalom's next. The winner here is decided after two runs. It's a case of lowest overall time winning. Slalom's much the same, other than the winner here being the competitor who has the fastest aggregate time after two runs. All the downhill courses are very weak gameplay wise, partly because they are too slow, with little to avoid, but primarily because they are far too long.

Last of the ski-based events is the ski jumping section which requires strength, grace and courage, not to mention a healthy insurance policy. Competitors with 'Eagle' in their name are frowned upon, especially if they're representing Britain. Two jumps are required, with points being

awarded for style and technique as well as the distance achieved. Hitting fire when the green light shows sends your skier spinning off into oblivion. Just like real life going through a red light means instant disqualification. Tapping left or right keeps the skis straight which is essential to build up speed. Once in the air it's 'simply' a case of keeping the correct stance by moving the joystick up and down and pressing fire at the right time as you come in to land. Leave the fire button too long and you could find yourself becoming an experiment in 3D television as you hurtle towards the world's press screaming wildly. Despite the simplicity of this event it's actually pretty

good fun thanks mainly to its speed, and I'll bet you'll never tire from making your competitor crumple up in a heap. Hear those tendons snap!

Bobsleigh next. Yep, speed rush city this one. Expect to push your competitors to 4 G as you hurtle down the course's 1,365 metres. The control here is of the wobble-wobble variety with frantic left and righting to push-start the bobsleigh. Once in it's simply a case of pushing either left or right to keep the best line on the track.

Coming in to the home straight and it's the luge event we bump into. This strange piece of kit is for one or two people who hurtle around the track bobsleigh-style in a light toboggan. The controls here (and indeed the game itself) are much the same as the bobsleigh event, although the winner is the person who has the best aggregate time over two runs. Bobsleigh, Luge whatever is up there with Biathlon. The 3D effect is fast and convincing and the grating sound

effects give this event a real hang-on-to-your-pants effect.

Lastly there's short track speed skating, where you get to wear rather raunchy skin tight-togs as you hurtle around an icy track with a group of similarly clad skaters. Once again it's a case of using left and right to build up speed, in case you wonder how you move it's a case of shifting left and right on the joystick with the fire button pressed down. This is a frustrating event to start with and requires a lot of time to get used to. Bear with it though 'cos it's the fastest event on offer and pretty damn exciting I can tell you, especially with those skin tight clothes. Phwoar!

So, all original stuff on offer huh? No, not exactly. And that's a big problem with Winter Olympics. You're likely to have seen games like this a million times before. Most of the sub-games require little more than either waggling the joystick or tapping it left or right. You could argue that this is a welcome blast from the past but the old Epyx games had much more variety than this. Take the similarity here between the four skiing events for example. The downhill and Luge are much the same also, hardly likely to create longlasting gameplay eh?

Presentation is very good though, with lots of options and some nicely detailed graphics, especially on the still screens. Sound FX are convincing too, and the tunes, while not being strong musically, create a suitably tense feel as you rush around the courses. If you're looking for a good blast from the past then take a gander at this, as it recreates the feel of the old Epyx product pretty well, and is the sort of game you'll dig out on occasions for years to come. **CU**

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THE HEAT IS ON



GREY-TRONIC

SUPER METHANE BROTHERS

Paul Presley reviews a game that involves releasing gas. Insert your own joke here...



Plenty of bonuses await the avid collector. Bunries, bananas, building bricks, etc.

How we did cartwheels when Arkanoid appeared. How we whooped and huzzahed when Frontier triggered our memories of a mispent youth sat in front of Elite. But see also how we treated Super Space Invaders with an adequate degree of distaste. You can only push nostalgia so far before it turns around and punches you squarely on the nose. A lesson there for us all!

But with that rather terse warning still ringing in our minds we once again embark on the express train of memories and return to our 8-bit salad days with Super Methane Brothers. The secret – and this is an important bit – is to treat your aging classic to a complete overhaul at the Nineties game workshop. This is what Apache Software have done



Different weapons lie on different levels. Fire, for instance, will make short work of any manshooting nasty.

with the Bubble Bobble genre and so managed to create a game that appears fresh and new.

HIDDEN DELIGHTS

The idea, as with all of yesterday's arcade brethren, is a simple one. Clear each screen of its enemy infestations and progress to the next. Complete a hundred and you win the game. Complete a mere ninety-nine or less and you are deemed to be found wanting. But wait! Such simplicity is perhaps too much to comprehend. Before you turn your attention towards something with a little more bite you should be told that there is more than meets the eye awaiting your joystick-carried commands.

Bonuses by the hundred sir, of many a variety. From raging fruits (of the apple and orange kind) to little motor cars. From giant playing cards to over-cooked sausages. All are worth points and so much more and it is here that we see the true beauty of *SMB* – the thought that has gone into providing the player with much more than the initial challenge.

To contain all this you would naturally expect a plot. Such plots are usually as thin as a week-old pair of socks and here we do not have an exception. The siblings are an unearthly pair, although they share

much in common with the Californian youth – a love of trekking the country in an open-top sports car – without wheels. On one such trip their car hits a snag, or a rock if you will, hurling the pair from their seats and towards a mysterious tower. In true Scooby Doo fashion they investigate and find themselves trapped, their only hope of escape coming from a mysterious stranger who arms them and reveals their objectives.

This is told in the opening animation, a graphical sequence that sets the style for the game to come. Cartoon themes are the key to *SMB*'s appeal. Cartoons in the Japanese mould (large eyes on small creatures). Cute and colourful is not



Complete a level and the Bungee Rope Of Doom will appear and drag you on to the next.

so much a watchword as a whole Bible at the designers' offices. The sound too is interesting – you'll either love it or hate it.

Apache appear to have gone to several towns and had what amounts to a field week when it comes to the game design though. Pick up enough banana bonuses and you gain access to certain cheat rooms. Collect four different playing cards and you arrive at the hidden playing card rooms. Accumulate enough bonuses in these rooms and you open passages to yet further stages. The list is endless and does more than enough to provide you with more to do than just shoot things.

Mind you, there's even several ways to do this. You have your gas guns of course, but you can also hit your opponents with water, throw marbles at them, hurl a few tomatoes, and even turn the pesky varmints into nine-pins and lob a bowling ball at them. All of this depends on finding the bonuses available and putting them to use.

IT TAKES TWO BABY
Now here's a funny thing. I was playing *SMB* by myself and after several hours I began thinking that the last-appeal might not be as great as I first thought. Then someone else picked up the second joystick, pressed start, sucked up a bad guy (the method required to dispose of them) and threw it at me, stunning me for several seconds – two-player gameplay had been discovered!

The two-player element to *SMB* is great fun. Because you can hit each other with bad guys, tomatoes, ten ton weights etc. and so the game takes on a very competitive feel as opposed to a teamwork kind of thing.

As we all know it's much more fun to beat your friend at something than to work with him. I know full well that sucking up monsters and jumping on platforms isn't going to appeal to everyone, but the brothers gaseous certainly provided fun for a couple of hours. As long as you don't plan on making a night of it, you might just find it fun too. *SM Brothers* is a pleasing starter before a fully blown meal. **CD**

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RELEASE DATE:	NOW
GENRE:	ARCADE
TEAM:	APACHE
CONTROLS:	JOYSTICK
NUMBER OF DISKS:	2
NUMBER OF PLAYERS:	1 or 2
HARD DISK INSTALLABLE:	NO
MEMORY:	0.5mb

GRAPHICS	*****85%
SOUND	*****80%
LASTABILITY	*****80%
PLAYABILITY	*****91%

Fun, just as it should be.

OVERALL 80%

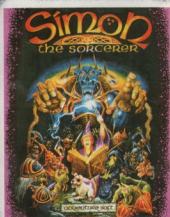
WARNING!

THIS GAME CONTAINS DANGEROUS PROPORTIONS OF HUMOUR AND WIZARDS AND DRAGONS AND GIANTS AND BARBARIANS AND OWLS AND QUADRUPEDS AND DWARVES AND LARVAE AND PRINCESSES AND WITCHES AND TROLLS AND GOATS AND GOBLINS AND DRUIDS AND SHAMEN AND WEREFROGS AND...

"What are you leering at?!" I snapped. The rock continued to stare at me but said nothing. It came as no surprise, dear reader. Everything in this magic forest seemed destined to rouse my anger. Only tomorrow a beery dwarf will tell me to naff off and a socially inept Swampking will lay a guilt trip on me. Banishing the shapeshifting witch and freeing Calypso the Wizard had sounded like any old computerised graphic adventure for hot rodding gamers.

Yet having savoured the armpit aromas of an angry troll, been eaten by an amphibian and having discovered how utterly uninteresting fungi and flora can be, I find myself in no ordinary quest.

With thousands of frames of (ouch!) eye popping animation and full colour music you must hear with your ears to fully appreciate, you'll move through a land so amazing you'll be amazed.



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CU AMIGA, Feb. '94

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MANCHESTER UNITED PREMIER LEAGUE CHAMPIONS



It may have one of the longest names ever, but Tony Dillon finds Krisalis' latest football foray is every bit as good as the other snapper titles.

If there was ever a good reason for a software company to experiment with various types of football simulation, it has to be a hot licence. Can there be anyone, apart from Audiogenic with their Emylin

Hughes' season of games, who have made more use of a soccer licence than Krisalis? I could attempt to list all the ways in which they have used the Manchester United name, but I fear I would run out of room. Some have been amazing, some have been dreadful, but Manchester United Premier League Champions is one of the best.

THE STEP OVER THE CLIFF

Some would say that Krisalis went as far as they could with the old side on, forced perspective view. Others would say that particular style of football game went out with the Commodore 64. Both parties will be happy to know that the latest release is a top-down view approach, as used in practically every football game since Kick Off. That isn't to say that this is like every single football game since Kick Off. If you thought that arcade football games had run out of new tricks to play, Manchester United Premier League Champions, which from this point will be known

as MUPLC to save wear and tear on my keyboard, will most definitely surprise you.

At first glance, it bears more in relation to Sensible Soccer than anything else. The players are quite small on screen, there's very little on-screen information (no scanner, the score only appears at important points in the match, along with the current time) and it can get quite fast and frantic. The teams have distinctive strips, and the ball is greatly affected by the type of pitch it's

MANAGEABLE HAIR

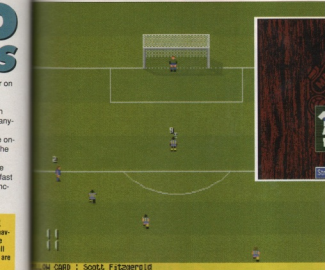
Something I've never been accused of having, but a weak link into one of the more unusual parts of the game. Along with all the usual fantasy leagues and cups that are par for the course with these games, Manchester United Premier League Champions features all sorts of other little charts, showing your progress through leagues and seasons, lists of top goal scorers, highest scoring teams and all sorts of gubbins designed to appeal to the more managerial minded players out there. Funny enough, the only difference between this and a managerial game is the buying and selling players option. Maybe it's being saved for the sequel!



The incredible Tactigrid - the heart of MUPLC.

Player Name	Team	Goals
David Nicholson	Chelsea	10
George Atkinson	Wolves	9
Paul Walsh	Portsmouth	8
Andy Davies	Southend Utd	7
Andy Edwards	Wolves	6
Paul Kirkham	Wolves	5
London Brown	Wolves	4
Kevin Scott	Swansea Town	3
Paul Power	Swansea Town	2
Peter Scarborough	Wolves	1
Robert Lee	Wolves	1
Paul Harrison	Southend Utd	1
David Oprea	Wolves	1
Scott Garrett	Wolves	1
Ryan Gibbs	Wolves	1

rolling on. There is a school of thought that says Sensible Soccer is as far as this type of game can go before it becomes unplayable. I agree, but this still gets a huge mark due to the work that actually goes on behind the scenes, rather than on the pitch itself. If you have a licence of a real world team, then it makes perfect sense to set your game in the real world too. Every team in here, and



Above: All the set pieces are in MUPLC, such as penalties.

there are hundreds to choose from, are all real teams with real players and, get this, real abilities. A Third Division team would never stand a chance against a Premier Division one, and that is shown in this game. Try to pit the two against each other, and you'll discover for yourself exactly how outclassed you can be.

GET REAL MAN

The realism of the game has to be one of its strong points. By using real players, that are as up to date as it is possible to be, the game has its own built in difficulty level. If you are beginner to the game, then you should be able to hold your own against only the worst of the bottom division teams. As you progress through the game and become more competent, you'll find the higher leagues easier and easier to play

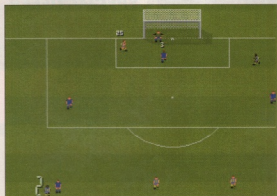
against until you can beat everyone.

Possibly this game's biggest strength is a single tactical screen called the Tactigrd. This marvellous invention allows you to tailor your formation and instruct individual players in a way never before seen in a computer football game. Forget programmed set pieces, throw away any preconceived notions about having fifteen different formations to play with. The Tactigrd allows you to program the exact way your team plays, from how wide you want a defender to wing, to how many midfield players should run forward when it looks like the game's going on the attack.

EASIER THAN SETTING THE TIMER

Like Sensible Soccer, MUPLC features an instant replay feature that lets you wind back from an especially impressive goal and watch it ever and over again. If you like, you can watch it in slow motion, follow the action by focusing on a specific player, and even watch the action from the other side of the goal! Depending on the amount of memory you have, you can wind right back to the start of the match and watch the entire thing in slow motion. I can't think of any better way to wind up your mates!

Below: You even get a choice of strip!



Below: Hot goalmouth action.

On the Tactigrd screen you select your team from the full squad – not just the first team – by browsing through their statistics covering aspects such as stamina, speed and intelligence, and then you can set the overall layout of your play. Thankfully, this screen can be pulled up at any point

in the match, so you can change your playing tactics at any point. There's no better way to turn a match around, as I found when playing against an experienced human opponent for the first time. Within no time at all, I found that I could run the ball down the wing and then chip it into the box for an almost guaranteed goal every time. Half time came, and my opponent moved his midfield players wide while bringing his defenders back into the box. In the second half I couldn't even get into the box, let alone score from it. This is really what makes the game as challenging as it is, and is the one facet that will bring you back to play it again and again.

Of course, you might actually be

wondering what the game is really like to play. Surprisingly good, although the speed of the game might take a little adjusting to. It all seems to run a lot faster than previous games, particularly on the dry or frosty pitches, and the ball spends a lot less time in the air than it does in other games. What makes it so playable is the fact that the team works like a team. Players are where you would realistically expect them to be, responding to the flow of the game properly, instead of returning to some preset mark on the pitch as soon as they are off screen.

MUPLC is one hell of a good foot-

ball game. Although the actual match itself might not be as smooth or fluid as Sensible Soccer, the controls might not be as comprehensive as Goal!, the tactical side of the game gives you far more control over your team than either of those. One worth having in your collection. **CU**

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RELEASE DATE:	MARCH
GENRE:	SOCCER
TEAM:	IN HOUSE
CONTROLS:	JOYSTICK
NUMBER OF DISKS:	2
NUMBER OF PLAYERS:	1-2
HARD DISK INSTALLABLE:	NO
MEMORY:	1Mb

GRAPHICS	*****82%
SOUND	*****79%
LASTABILITY	*****89%
PLAYABILITY	*****91%

Krisalis take the football game that little bit further.

OVERALL 90%

Left: MUPLC features all sorts of wonderful cups and leagues.



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We've all seen the little ads near the backs of mags, offering us the chance to win a fortune on the horses or the pools. Tony Dillon was a little hard up for cash, so he decided to investigate a couple.

WANT TO BET?

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VOITHIA SOFTWARE
£14.99

Accuracy test: Seven out of ten results predicted correctly including the only three draws.

You would think, with all the computing power available to home users these days, there would be more of these things about. The



The predicted results.

Soccer Expert, from Powys-based Voithia Software, is one of the simplest pools prediction programs available, along with being one of the cheapest. Before you fall into the trap of assuming that, "you get what you pay for", let me tell you that this is also one of the most accurate prediction programs around.

Using a complicated system of weights and measures, it takes the current performances of all the teams in all the leagues, and runs a series of comparisons to predict the likely outcome of a match. All the teams and

leagues are supplied up to date, although it's up to you to keep the league updated as the weeks roll by.

A class product, available from author Andreas Andreou at Voithia Software, 32 High Street, Welshpool, Powys SY21 7JP.

ORACLE ESP SOFTWARE

Accuracy test: Correctly picked eight placed horses in ten races.

One sport that can definitely claim to be more predictable than soccer is horse racing, which explains the plethora of horse racing predictors around. Oracle is, without a doubt, the most impressive one I have ever come across. Where most packages of this type require you to enter every last scrap of information you can lay your hands on, Oracle has a surprisingly large database of



All the available courses can be viewed.

courses, riders and trainers, leaving you to only tell it about the horses that are running, and then let the program do the rest.

Oracle is stunningly accurate, to the point where the author, David Somerskill no longer needs to work, living quite happily off his gambling earnings. Of course, information like this doesn't come cheap, and £75 for the initial program plus £30 for monthly updates might be a little out of some people's league, but if you're really serious about your gee gees, there's no better package to lay your hands on. Available from ESP Software, 32a Southchurch Road, Southend-On-Sea, Essex SS1 2ND. Tel: 0702 600 557.

THE TIPSTER

SIDMOUTH SOFTWARE £34.95

Accuracy test: Correctly named six placed horses in ten races.

The Tipster from Sidmouth Software comes direct from the land of the experienced betting expert – the person who has all the systems worked out for themselves and consequently goes through all sorts of horrendous maths first thing on a Saturday morning. The package con-



The Tipster asks for some hefty information, tains all the actual calculations, but none of the information, so you do need to spend half an hour or so scouring through the back pages of *The Sun* or *The Racing Post* to find all the information there is.

The Tipster comes in two different incarnations – Tipster International for the amateur and the more advanced and more accurate Tipster Professional. Both supply you with a grid, into which you enter all the information you need before keying it in on screen. Then the computer will give you the most likely horse to win, plus the best horse to lay an each way bet on. Some knowledge of horse racing is required, but it's an excellent package, well worth the money. Available from Sidmouth Software, PO Box 7, Sidmouth, Devon EX10 0TD. Tel: 0395 567073.

A WORD TO THE WISE

Before you even consider spending your cash on these, or similar products, there are a couple of things you must consider. Firstly, none of the prediction programs on the market are guaranteed to make you money and the ones we reviewed don't claim any more than 50% accuracy, even though in our tests they scored much higher. A working knowledge of the sport concerned is a must, as these are merely aids to your own predictions – don't put £100 on League Of Superheroes to win just because a product told you to – check it out for yourself and see if your conclusions match up!

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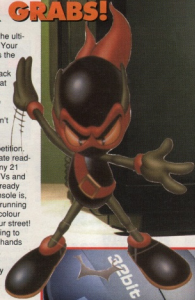
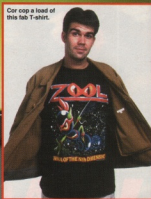
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SONY

This 21" colour TV could be yours.



Here he is - Zool - the wacky little gremlin.

RULES AND REGULATIONS

- 1) This competition is not open to any employees of EMAP Images or Gremlin Graphics Software Limited.
- 2) Nor is it open to work experience people called Derek.
- 3) The Editor's decision is final, and no correspondence will be entered into. We won't answer your letters either.
- 4) Closing date for all competition entries is 20th March 1994.
- 5) Answers given inside sealed envelopes will be ripped up and binned.
- 6) There is no official cash alternative to the prizes stated, but we might buy one of the TVs off you for a tenner.



Planet of the Page Three Girls – what a stunner.

SNAPPERAZI

ALTERNATIVE OUT NOW £25.99

If there was ever a game that could win an award for being the most sponsored event in the software industry, this would have to be it. Not only is *The Sun* newspaper behind it, but so are Fizzy Chewits and Domino Pizzas. While it's encouraging to see



The Stars of the Low Key celebrities. Get them to show their pearly whites for bonus points.

idea of the topics covered. You play the Snapper, a small but willing photographer who wants to get into the world of the paparazzi.

To prove his worth to *The Sun* editor, he has to race around some large, jerky levels, taking pictures of some of the most mishapen sprites ever seen, while collecting rolls of film and trying to avoid bills, shops and anything else that might try to take his money. He also needs to collect enough delicious Domino pizzas, so he can then build a space ship to take him to the next level.

I'm sorry, but this is a really dreadful game. The joystick controls are sticky and wooden feeling, the sound effects are drab and basic, and the garish use of background colours gives the game a very confused look. I can't think of anything positive about this game at all. Even the box front looks like it was thrown together in the dark.

Hayleigh Rodgers

31%

so many large companies taking an interest in the games world, it's a shame they had to sponsor such a terrible game. No, scratch that, Snapperazi is staggeringly terrible.

Alternative have surpassed themselves with creating a game that plays on the lowest interests.

Levels like Planet Of The Page Three Girls and Planet Royale should give you some



SABRE TEAM AGA

KRISALIS OUT NOW £25.99



Sabre Team was an extremely exciting team-based strategy wargame when it first appeared some 12 months ago. For the most part, strategy games have really only held a corner of the market, although titles like *Laser Squad* occasionally break through into the mainstream. Sabre Team was a very brave attempt at smashing down preconceptions of what a tactical wargame should look and play like, and to all intents and purposes it worked very well. Only one thing really held it back, and that was the fact that it was very slow. The amount of time you actually spent playing it compared to the lengths you had to wait for the computer component to go through the motions was too much for some people, and therefore it never really got all the credit nor sales that it really deserved.

Sabre Team A1200 is a completely different kettle of fish. With the exception of a couple of levels switched about and a few other tweaks to the game, the actual gameplay and plot are the same as before. You control a team of four characters, chosen from a roster of eight, and have to go into combat areas in an SAS style attack, taking out everything from POW camps to foreign Embassies using a combination of skill, cunning and cool, calculated judgment.



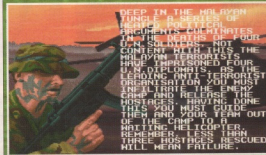
The 255 colour graphics give Sabre Team even more realism.

The graphics have been greatly improved since the original game with plenty of speech and other sound effects thrown in for good measure. Best of all, though, the waiting time has been cut almost completely. When you have finished your turn, you only need to wait a couple of seconds for the computer to figure out its moves, rather than the 40 or 50 seconds of the original. Anyone who has played the game doesn't need me to tell them how much more playable this finally makes the game.

Once a superb strategic blast that suffered from needless playability bugs, Sabre Team is now just a superb strategic blast.

Tony Dillon

89%



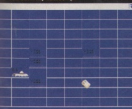
ADDICTION

THE SOFTWARE BUSINESS OUT NOW £25.99

They've been fairly quiet for the last couple of years, but now The Software Business are back with a vengeance: starting with *Addiction*, a collection of 25 games that show Amiga gamers exactly where their favourite games came from, and tracing the evolution and growth of computer games from *Pong* through to *Frontier*. All the games on here have been seen on the public domain market before, but I have to admit, it was quite entertaining and thought provoking to sit down with these faithful re-creations of the games that made the games industry.

All the games you would expect to see are here on *Addiction*, from *Space Invaders* to *Pacman*, taking in *Breakout*, *Tetris*, *Berzerk*, *Missile Command*, *Battleships*, *Centipede* and a superb version of *Defender*. If you can't spot some of your favourites in here, I'd be very surprised indeed.

'You sunk my battleship?'



Boulderdash fans will love this AMOS clone!

Of course, £26 for games that are, essentially free, may seem a lot to most people, but that's before I mention the luscious 48-page manual that gives you the entire history of games, along with details of how these games have shaped the world. For the first time, you can read full instructions to many of these games and leave the booklet happy in the knowledge that you at least understand why games like *Pacman* were so addictive, even if they pale a little in comparison to something like *Dynablasters*.

Like any collection of games, you are going to get some dull titles. Games like *Fruit Salad* and *Monaco* might as well have been left off, and I would have liked to have seen a faithful conversion of *Battlezone*, but you can't have everything. Games like *Missile Command* and *Jeff Minter's* exceptional *Berzerk*-inspired *Llamnams* are well worth getting hold of, and if you don't have most of these games already in your collection, then this is a package well worth investing in.

Tony Dillon

79%



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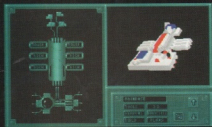
The intro has spacecraft flying between planets. The game is about underwater empire-building. Can anyone tell Paul Presley what's going on?

Like a good laugh, me. Especially when it is at someone else's expense. That's why I love looking at foreign games that contain all manner of translation gaffes. *S.U.B.* should be able to keep me sniggering throughout the rest of Spring thanks to the atrociousness of its introductory sequence.

Oh the graphics are superb, it's the text that constantly writes itself across the screen that allows my laughing gear to shift out of reverse. Graphically, it has the look of one of those European PD demos that crop up month after month—the ones with beautifully-rendered 3D spaceships flying through space that make people go, "Ooh, isn't it pretty". Of course, beautiful as these spaceships are, they don't seem to have much bearing on the game itself which, for the main part, deals with the exploration of Earth's sea bed and the manufacture of a global submersible empire.

Competing against several other globally-minded figures, you have to take your initial supply of bases and Deep Sea Vehicles (yes, that's what the D.S.V. in *SeaQuest* stood for) in order to explore, expand and extract. Explore uncharted areas of the sea bed, expand your horizons to cover as much territory as possible and extract mineral wealth and turn it into an army. With an army, you see, you can embark upon a killing spree of your enemies.

However, before I get onto that I really must just go back to this whole translation thing. Some might say, 'Well it's from another country, you can't expect perfect English'.



S.U.B.

Nice intro sequence, it just goes downhill after this. Background: The only thing missing in a scrooby message thanking Bill and Jack and Skim and Bloffo etc.

Well no, I wouldn't if it were being released in another country. But it isn't (well it is, but I'm talking about this version), it's being released here. If distributors are going to release a foreign game onto English-speaking shores it is their moral responsibility to translate the text into readable English. Ooh, it gets my paw, it really does.

AQUA-BATICS

Somewhere along the lengthy line that is computer gaming history, someone re-wrote the

rules. No matter what type of game it was, from the shoot 'em up to the strategy fare, you could be sure that it would at the very least be fun. Then at some point fun stopped being important and people started to take everything seriously. The upshot of this horrendous event is a game like *S.U.B.* At no point while playing it was I ever having fun.

So I could write this review in one of two ways. I could sit here and go

Left: Your base—where you build up your empire.



Just one of the exciting (ahem) underwater vehicles on offer.

through each of the game's elements, analyse and assess each separate nuance and came up with an overall impression based on the results. Or I could simply tell you that *S.U.B.* isn't fun and leave you to get on with something that is.

If I had taken the analytical route I would have told you that the in-game graphics are fairly good, but nothing special; that the music is professional at first but soon begins to grate; that the control interface could have done with being far more user-friendly; that at no point do you ever feel as though you know exactly what is going on. But that despite all of that it is very polished, has no immediately apparent flaws in its structural design and it could no doubt provide you with something of a lasting challenge for a while.

Trouble is it would all be academic because it's just plain dull. It has all the enjoyment properties of cleaning somebody else's toenails. Throughout my, thankfully, brief acquaintance with it I just kept thinking, 'When can I get on with a more enjoyable assignment?' and that is always a bad sign. **CU**

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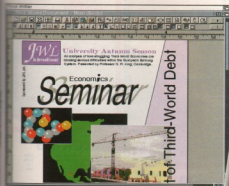
RELEASE DATE:	OUT NOW
GENRE:	STRATEGY
TEAM:	IN-HOUSE
CONTROLS:	MOUSE
NUMBER OF DISKS:	3
NUMBER OF PLAYERS:	1
HARD DISK INSTALLABLE:	No
MEMORY:	1Mb

GRAPHICS	*****75%
SOUND	*****70%
LASTABILITY	*****66%
PLAYABILITY	*****50%

Second-rate strategy game.

OVERALL 58%

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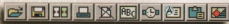
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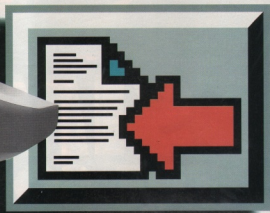
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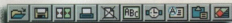
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PART 1

Simon the Sorcerer is guaranteed to make you smile,

but even in the best fairy stories things can turn nasty.

Tony Gill in the first of a two-part complete solution lays a trail through this tricky game.

Happily, things start fairly easily, giving you free rein to move around the village and forest conversing with the flora and fauna. Sadly, you can forget about getting any help from your dog as he has no intention of leaving the comfort of his blanket. In this game, you are on your own mate.

Before leaving the wizard's house you must grab the magnet off the fridge door and get the scissors from the drawer. Walk to the nearby Blacksmith's Forge and take the rope, plus the bell-clapper which is lying on the bench. (Well, if he needed them he shouldn't have left them lying around should he?) In the nearby village you will find the Druid's house with a ladder propped up outside. As he is off somewhere, (presumably sacrificing mistletoe and collecting virgins) now is the time to pinch his ladder and stick it under your hat. Pop inside and you'll find that our bearded friend is heavily into herbal remedies, but don't waste time trying to pinch the marijuana, it isn't for the likes of clean-cut CU AMIGA readers. What you must do is pocket the cold remedy and a specimen jar. (Well you never know when you might get caught short somewhere, and then you'd do anything for a specimen jar.)

Well that was a lot of work, so head for the pub and see if we can either pull a girl or a pint. There is a box of matches which someone has carelessly left beside the one-armed

SIMON

THE SORCERER

Solution



Before you enter the dwarves' cave, examine the ground carefully for loose rocks. Find the right rock and the secret password will then be revealed.

bandit which should be taken, and there is a sleeping dwarf who would look much better if you were to use the scissors on his beard. By all means try out your best chat-up lines on the girls beside the bar, but once you've realised that you aren't going to get your evil way with them, go through to the private room next door and talk to the wizards. The wizards will clue you in to the fact that to get ahead in this game you'll need to find a magical staff.

Head off into the forest to find the

rights dreaming about.

Sooner or later you'll come upon a simple owl who has foolishly swapped his Amiga for a handful of magic beans – some folk never learn. First use the bucket of water on the beans, then take the beans out of the puddle and return to the wizard's cottage. At the rear of the cottage is a large compost heap which will make an excellent place to plant the magic beans. You know what's going to happen next don't you? Sure enough, before you have time to blink, the magical beans grow into a... watermelon!



Don't be fooled by the get in the hollow tree. He may spot a head of rubbish most of the time, but if you hang around long enough he does drop quite a few hints, along with a very useful object.

Ogre who is sitting on the trail with a thorn in his foot. If you remove the thorn he'll reward you with a silver whistle which will bring the Ogre to your aid anytime in the future. (Shades of Androcles and the Lion) You now have the musical solution to the nasty Troll who blocks the troll bridge. Approach the troll, speak with him, and he will attempt to steal your whistle. In the commotion which follows, the Troll will foolishly blow your whistle, causing the Ogre to appear and beat ten bells of hell out of him. Who says life isn't fair?

The Witch's cottage is your next point of call. Use the well outside to get a bucket of water, then creep inside the cottage to encounter the evil one. Before you can do much in here you'll be given your marching orders and thrown out. But don't worry – "You'll be back!"

Meanwhile, back in the forest, there is a tree-stump which is rapidly being demolished by some chatty woodworms. Spend a few minutes talking with them and you'll find out what type of wood they spend their

Now here's a useful piece of information. This watermelon is just the object to stuff into the musical instrument belonging to that noisy fool in the forest and once he's gone you'll be able to pick up the sousaphone. Clever eh? Don't tell everyone, just keep it under your hat.

The next weird, but lovable, character we are going to visit is the swamplord who lives in the hollow tree. As he has gone to the trouble of preparing lots of swamp stew it

What's there now?





One of the early challenges is to get this ability to talk to you.



Right: There has been one too many occasions when the Troll has been outwitted by those pesky billy goats, so now he is fighting back. Unless he gets a roast goat dinner, there will be no more "Trip-Trappling" over this troll bridge.

would be churlish to refuse to eat some, so grab a spoon and tuck in. There, that was delicious wasn't it? No? Well perhaps the second bowl will taste better. Ask for a second helping, but this time you should put the stew into the specimen jar for later. (This is a long game and you may need a snack before we finish.) If you continue to take bowls of stew, eventually the mixture will run out, and your host will be forced to leave the house to get more ingredients. Now is your chance to move the chest and find the trapdoor beneath. On the jetty below the house you will find that a loose plank prevents you from going any further, so it's back to the forest for you.

Sitting alongside the path you'll find a woodcutter who will give you a metal detector if you promise to help him search for the magic mithril ore. Being a typical adventurer, you should promise him anything as long as you can get something for nothing.

Up until now we've only spoken with strange folk who seem to be stupid, so perhaps you should seek out this game's Help Centre. In the forest is a wise old owl who lives in a hollow tree. Repeated questioning of this fantastic, feathered font of facts will reveal many of this game's secrets – although you'll have to search for the gems amongst a load of drivel. Keep a sharp eye on the owl and you will notice that the shock of seeing you will cause something to



fall from his plumage. Picking up this item will be "a feather in your cap".

In the eastern half of the forest is the crossroads. Take the south-east path and this will bring you to the base of a tower. There is a large bell here which is one "ding" short of a "dong", so use the clapper to repair it. Operate the bell and this will make a rope appear. Climb the rope into the tower and get into some serious snogging with the princess who lives there. Normally a kiss from a fairytale character would make things better, but a peck from your fair lips will turn

Swamp stew may make your stomach hurt, but there are some strange characters in this game who would be glad of a bowl-ful. Walk to the vines at the side of the crossroads and you'll find yourself a fisherman with quite a useful catch.



If it's silly conversation that you like, then there is nowhere better to have a bit of a shaggy than in the local pub. While you're here make sure you feed the mouse on top of the fruit machine and give that drunken dwarf a beard a trim.

Left: You having devoured all of the mud stew, the Swamping has now gone to fetch more ingredients, leaving you to discover the trapdoor hidden under the wooden chest.

the princess into a pig. Pick up the pig and return to the village.

Just past the Druid's house is a picturesque cottage with a door made out of truffles. Use the pig on the door and it will gobble a hole through it in a flash. Inside the cottage you can collect the bee-keeper's hat and smoke-gun. Go outside to the beehive and wear the hat. Use the matches to light the smoke-gun, then use the smoke to calm the bees, (or at least choke them senseless!) then take the wax from the hive.

Ho' on your lips, and a dwarf's beard on your chin, head for the entrance to the diamond mine. The first thing that's needed to get into this area is the password – BEER – which is written on the underside of the rock found just outside the cave. Once you arrive at the bottom of the stairs you can offer the barrel of beer to the guard and then help him carry it down into the cellar. The fat dwarf who is asleep on the floor can be persuaded to roll over if you tickle him with the owl's feather, and this will reveal a key. Nip back upstairs to the seated dwarf then down the other staircase to where the three dwarves are singing. There is a hook hanging from a post which you can pick up. Use this hook with the rope and they will combine into one item. (It's a bit like a soap on a rope; but whatever you do, don't attempt to wash your bottom with it!)

Use the key to open the nearby door and you'll find yourself in the diamond vault. The guard is easily



Without the voucher you might as well give up here.

Time for another drink I think, so "leggit" back to the pub and order a pint of whatever suits your fancy from the barman. When he stoops to find you a glass from beneath the counter, quickly bung up the beer barrel with the wax. The barman will now find that no beer comes out of the barrel so he will assume that it needs changing. The barman will take the barrel outside and dump it. The barman will give you a free beer voucher as compensation. You are now able to nip outside and pick up a barrel of beer. If only life were like that!

The next characters we should sort out are the dwarves who live in the cave in the centre of the forest. So with a song in your heart, a "Hi

brided with the beer voucher and he'll reward you with a diamond. Take a trip back to the village, and with a bit of arguing you'll be able to sell your glistening prize for 20 gold pieces to the grebeater seated by the duck pond.

Having done all this work you might be feeling peckish and be tempted to sample that swamp stew in the specimen jar. After all it can't be as awful as you remembered it. Oh yes it is! Instead I suggest you return to the crossroads, then go to the edge of the chasm. Find the vines which are almost hidden in the bottom left of the screen and climb down them. Here you will find a Gollum who is fishing in the river. Offer the swamp stew to him and you will be rewarded with a magical ring.

Exciting isn't it? I can hardly wait for the final instalment next month!

TOP QUALITY AT



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THE GAMES MACHINE 92%

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Ryxx, once there you must destroy the mutated insectoids and save the universe.

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91% THE ONE MAGAZINE

88%

THE ONE MAGAZINE

Qwak is simple stuff, but it's hugely addictive and a great laugh. Budget games never smell so good."

ASSASSIN
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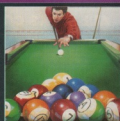
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AMIGA FORMAT

"an incredibly playable and highly addictive platform cum shoot-em up at a bargain price."

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VFM



BUDGET

Can't afford any new games this month? Don't fret, dear reader, there are some top re-releases this month, as Hayleigh Rodgers explains.

ASSASSIN

TEAM 17 CLASSIC OUT NOW £10.99

Even though Assassin was generally regarded as the best example of how to do a *Strider* clone on the Amiga, it didn't sell particularly well. However, because Team 17 are the software equivalent of the Midland Bank, they've listened to what the public didn't like about the original Assassin, tarted it up a bit and re-released it at a new easy-to-afford price.

As you may have guessed, the game's plot remains the same. Take control of the Assassin and make your way through four massive zones, with the ultimate goal being the destruction of Midan, a twisted, power-crazy being intent on causing havoc. On the way to Midan's base you'll encounter a range of crazed soldier-types which have to be taken out before they manage to destroy you. There are power-ups galore to be collected throughout your mission, which boost your firepower and make things just that little bit easier.

The most noticeable difference between this game and the original Assassin is that the main character now carries a more useful gun, as opposed to his boomerang. This makes the game far more immediate – you no longer have to creep slowly through the levels if you don't want to (although you know what they say about fools rushing in) because your Assassin's newly-acquired weapon is so effective you can often take out adversaries before they even know you're there.

There can be no doubting that Assassin is an extremely polished platform game and at this price is well worth a look. But it's certainly not worth an extra tenner if you purchased the full-price version.

80%



CRUISE FOR A CORPSE

KIXX XL OUT NOW £14.99

Delphine may be remembered most fondly for *Another World* and *Flashback*, but this graphic adventure released between the two is in some ways their finest achievement. *Cruise* casts you as Raoul Dusenier, a detective invited to spend some time getting away from it all on a luxury liner. However, your tranquil holiday is spoiled prematurely when your host is murdered, throwing you headfirst into a complex web of intrigue in search of the murderer.

Solving the crime isn't easy. There are numerous other characters roaming the vessel and must have a secret or two to hide.

Apart from entering the other passengers' apartments and rummaging through their luggage and accessories to discover clues, you need to spend time eavesdropping on conversations and employing devious cross-examining if you are to get anywhere at all. To this end, things can become frustrating because you often need to be in the right place at the right time – something which has never worked well in graphic adventures. After all, there's nothing more frustrating than being punished because you didn't get from A to B within a strict time limit, is there?

But it's *Cruise's* atmosphere that helps to negate this particular gripe.

Graphically, it's nothing short of stunning – all the characters move extremely fluidly and the use of cinematic close-ups and the occasional black and white flashback sequences which detail events prior to the cruise really do add to the overall tension.

It's been two-and-a-half years since the game's original release and it's aged really well – it's certainly on par with the likes of *Simon the Sorcerer* and *Beneath a Steel Sky*. And at this price it deserves to sell in droves.

Do yourself a favour – buy this now. You won't regret it.

90%

One of the characters you'll meet during your adventure.



LEISURE SUIT LARRY

KIXX XL OUT NOW £14.99

I don't know about you, but there's nothing I like more than watching American situation comedies. They really are the funniest things ever, I reckon, and the way most inject a degree of sentimentality into the proceedings is not only heart-warming but reaffirms my faith in the human animal.

I am, of course, lying. American humour is generally as funny as watching the war develop in Bosnia, so it was with some reluctance that I loaded up this, the first in the long-running series of adventures revolving around the hilarious exploits of Larry. His comical attempts to secure true love (or, failing that, a quick wedding) have apparently kept thousands entertained during countless sequels and those of you who missed his first outing can now snap it up at a



Would you take a chance on Larry.

relatively low price. But would you want to?

The answer, in a word, is no. Unless you like dated visuals, an antiquated player interface and non-troublesome puzzles.

Like *Cruise for a Corpse*, some of these brain teasers are time-based which don't exactly complement the crude parser (you often lose valuable seconds trying to get the game to do exactly what you want). But the difference here is that *Leisure Suit Larry* doesn't have any redeeming features to compensate for the odd frustrating moment, meaning that you're more likely to use the disks as ashtrays rather than load the damn game up again. Do yourself a favour – pass this by.

50%

LASER SQUAD

BUZZ OUT NOW £9.99

I'll get this out of the way right now: *Laser Squad* is an updated version of *Rebelstar Raiders*, an old Spectrum game. But, hey!, don't worry your pretty little selves because — ta-daa! — it's great!

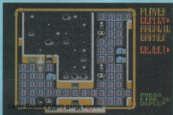
For your tenner you get five sci-fi scenarios spread over seven difficulty levels, all complemented by some great strategic action. It's your job to work your way through increasingly tough space battles, blasting anything looking remotely hostile and picking up additional items. You instruct your band of mercenaries using either the joystick or the keys to make the required selections, and by ploughing through a series of sub-menus you can go into greater detail. Battle tactics, attack formations and so on play an integral part in any successes you may have so it's important to experiment with minor details like these if you want to get anywhere.

Okay, so it may not sound like the most enthralling gaming experience ever (especially if you've never played this kind of thing), but for some reason *Laser Squad* is immensely enjoyable. There's a great deal of satisfaction to be gleaned from senselessly killing alien slave baskets just because they look a bit funny — even arcade punts will gain a large chunk of enjoyment from this budget release. And you can't ask for much more than that, can you?

82%



Watch out! Oh, no you won't.



GUNSHIP

KIXX XL OUT NOW £12.99

In these days of sophisticated flight sims with ever more impressive external views, Gourad shading and slick presentation, it becomes increasingly disheartening to reappraise the plane games of yesteryear. *Gunship*, the prequel to *Gunship 2000* (obviously) was originally released in 1988, and unfortunately it shows. In terms of options and things to blow up, everything is present and correct. You get to equip your chopper with whatever weapons you feel are necessary for the mission and combat zone you've selected and then climb into the blue yonder for a bit of blasting action.

But it's the way the game's presented that gives away *Gunship*'s age. Flight sim enthusiasts were obviously more easily impressed back then, so the game's graphical style may not have seemed out of place. Now, however, *Gunship* looks, feels and plays like a C64 game. There's no complex shading, the 3D is slow and jerky and most of the sound effects are pathetically weedy.

The only thing good about *Gunship* is that without it *Gunship 2000*, the best helicopter sim to date, wouldn't have seen the light of day. Let's just thank heavens for that and say no more, shall we?

45%



Look at this lovely sparse landscape. On second thoughts don't.

KING'S QUEST

KIXX OUT NOW £12.99

Hurrah! Another ancient Sierra release. And what a crock of pooch it is. But before we deal in opinions, let's talk about the plot. You are Sir Graham, the bravest knight in the kingdom of Davenport. Three valuable treasures have been swiped from the King's stores and you have been charged with the task of retrieving them. Do this and you'll become heir to the throne.

Even if you offered me the position of God I wouldn't have accepted this challenge. It's not that the puzzles are obscure, it's just that the game's origin — the PC — is blatantly obvious. Thankfully, Sierra recently realised that their conversion process leaves a little to be desired and have tied-up a deal with Revolution Software whereby they completely rewrite Sierra's original code, using the Amiga's capabilities to their fullest.

Unfortunately, this doesn't really help us here. The game moves like a snail. Superglued and stapled to the floor, resulting in too many moments of lengthy disk accessing, and the characters aren't much faster. After you've attempted to cross three screens it soon becomes too much to bear and the prospect of holding down the two Amiga keys and Control is a tempting option.

Why on earth Kixx XL have decided to re-release this tedious effort at the same time as *Cruise for a Corpse* is quite frankly baffling. In terms of quality and enjoyment, the two couldn't be further apart, meaning that one of the pair isn't likely to be very successful. And I think we all know which one I'm talking about.

45%



Sir Graham begins his half-hour trek across a screen.



Floor

Sword and sorcery action — with a difference.

LORDS OF CHAOS

BUZZ OUT NOW £9.99

Like the sound of *Laser Squad*, do you? Well, come on down for what is essentially more of the same as we check out *Lords of Chaos*, this month's second Buzz release.

Just swap all the super-hard space geezers with more weed-looking but still quite powerful wizards and such like, exchange the beely weapons-based combat system with more sedate but equally efficient spellcasting, replace the word 'Laser' with 'Lords Of', and 'Squad' with 'Chaos' and you've pretty much got the idea.

And that's pretty much the size of it. I could, if I wanted to, go into how you use either the joystick or the keys to make the required selections, and by wading through a series of sub-menus you can go into greater detail, but I'm sure you've seen it all before and probably weren't that interested in the first place.

Okay, we've determined that the two games are all but identical, and this is perhaps the problem. You'll notice that both *Laser Squad* and *Lords of Chaos* have been marketed identically, mainly because the two games really are very good. But what confuses me is why Buzz are releasing them during the same month because I can't see why anyone would want to buy both when just one provides a great deal of playing time. So, basically, you pays your money, you takes your choice...

82%

Adventure Helpline



VAMP

KGB

I am completely stuck in KGB from Virgin. I have got out of the stuffy room and got all of my equipment back, the problem is that when I get back to Department P, Major Vovlov says that I didn't find out the nature of the gangster's activities. When I go back to Verto's flat he always shoots me no matter what I do, please help me. Jamie Aitken, Musselburgh.

Did you use the polaroid camera on the blank white piece of paper? I like polaroid cameras because it avoids all of those funny looks and drooling. I used to get from the staff at the chemists when I went in to pick up my snap-shots.

As I recall you can deal with Verto by simply hiding behind the door when he returns. (He should have gone out when the American sets off the alarm.) When he returns, attack him straight away. He's got a blue piece of paper on him which you should also photograph and then return to him.

MONKEY ISLAND

I'm having a terrible problem with that old Monkey Island. How do I get the mug o' grog to the prison without the mug melting? And then how do I melt the cell lock? P.S. Any chance of a job in your mag?

James Pardoe, Ipswich.

There are loads of mugs on Monkey Island, (and more than enough in the CU AMIGA

Vampyra: tasteful, discreet, and pure as the driven slush. Hold onto yourself. Our girl is

back to solve all of your little gaming problems.

office thank you very much, so we certainly don't need any more!). Why don't you pick up a few of the mugs and then use them one after another as you make your way to the jail?

MEGATRAVELLER

Your eyes are deep and blue, like a lake on a moon-lit night. Your hair, the colour of ravens wings in flight.

Your lips the seductive colour of blood, that flows. A body to die for, and you know your style shows. Vampyra, the lone candle lighting the dark window of my heart.

You have aroused feelings in me that I haven't felt for three hundred years. You also make my fangs tingle.

As you seem to be, not only very beautiful, but also highly intelligent, perhaps you can help me. My problem is that I can't find the ancient experts in Megatraveller II. Yours ever, Count Vladimir, Bassarab.

You old smoothie. I would love to help, but I must confess I've failed you. I contacted the software supplier, but even they don't have a solution. To make matters worse, the American software company who wrote the game appears to have gone out of business. Your only hope is that someone sees this plea for help and writes to me with the solution. Any offers?

ELVIRA - MISTRESS OF THE DARK

Nice earnings! I was wondering if you could help me with that aged beast of a game - Elvira.

I need the Crusader's sword from the tomb in the chapel. I've tried giving the crown to the Crusader but that doesn't work.

Zeph, Mid-Glamorgan.

Monkey Island - everyone's favourite cup 'o tea or grog.



What has Elvira got that I haven't got more of? You do realise that none of what you see is her own. Once you get inside the Chapel you must take the prayer book. Insert Elvira's ring into the cross. Enter the chamber under the altar and get the crown. Face the crusader wall and use the prayer scroll on the wall. Put the crown on the crusader's head and take the sword.

KNIGHTMARE

I would like to bet that most of your problem mail is from people who play Knightmare. I am having a lot of trouble. This game really is a nightmare. I've got to a place called the prison and I have explored everywhere, but I don't know what to do next. I have tried using spells from the wand of magic and other items, but they don't seem to help me open the prison. Can you give me some help?

Alex Doe, London.

If you really believe that most of my mail is asking about Knightmare then you don't know much about CU AMIGA readers.

The first thing you'll see when you enter the prison is a porthole which leads you back to Mr. Childs through a false wall. In the prison there is a door which

Amiga. When I went to a shop to buy Police Quest 3 I was told that it had been removed from sale. I am desperate to get hold of this game. Could you possibly find out whether it can be bought anywhere where?

David Smith, London.

When I read that the game had been removed from sale I was very worried in case this was some form of censorship. Goodness, they might even try to censor me next! However you got me going for no reason. And you know how much I hate that...

Sierra no longer produces games for the Amiga, but their back catalogue is still available if you contact them directly. You can either order via a credit card on 0743-303171 or write to Sierra-On-Line Ltd, 4, Brewery Court, The Old Brewery, Theale, Reading RG7 5AJ. Police Quest III costs £29.99.

Incidentally you may like to know that some new Sierra games may appear on the Amiga, because other companies



Indiana Jones - where treasure, adventure, excitement and talking parrots abound.

left. Place the cauldron on the left-hand hole. Touch the right-hand hole and this will dislodge the pendulum which is in the middle hole.

Use the pendulum to find the hidden gold in the undergrowth and give this to the Orator.

This will get you a piece of rope which you can use with the cursed branch to make a bow.

With a bow and the arrows you'll be able to knock down the walnut. Use the sword to open the walnut and release the fairy. I'm sure the fairy will be so grateful he/she'll give you something. Oooh!

SUSPICIOUS CARGO

I've been stuck for a very long time in Suspicious Cargo. My problem is that I cannot get into Hyperspace. I've completed the 'puzzle' of the DMS board where you have to hot-wire the hyperspace computer, but I can't make the jump to hyperspace without the police catching me.

Ian Lloyd, Carterton.

This game is too boring to even warrant a witty remark so here are the bare facts:

Run Bridge, Examine Hyperspace Governor, Insert Hyperspace Catridge, Push Hyperspace Initialise Switch, Pull Hyperspace Lever, Push Hyperspace Lever, Run Auxiliary Control Room.

Play And Solve Puzzle, Run Bridge, Pull Hyperspace Lever, Push Lever.

I've pulled a lot less, for a lot more fun, I can tell you.

INDIANA JONES AND THE FATE OF ATLANTIS

My problem is with Indiana Jones and the Fate of Atlantis. For the past three weeks I have been talking to a parrot outside the temple of Tikal, but I have never been given the opportunity of saying 'title' as indicated in CU AMIGA (February 1993), so I'm unable to get past Sternhart and enter the temple. If

you could help me on this point I would be really grateful.

John Gough, Chardstock.

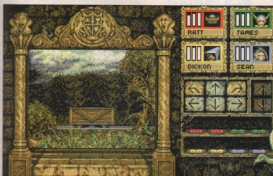
Getting past Sternhart is simply being able to give him the name he asks for. All you need to know is that the parrot will give you the answer you need if you simply talk to it.

Sooner or later you can say 'Name', (or something similar) and the reply that the parrot gives you is the answer. Save the game and try all of the options the parrot gives.

"Well, that's it platonically for another month, putting in such sweet sorry but don't fret I'll be back next month with more answers to your gaming queries. As a parting gift I'll leave you with one final piece of advice: if you are stuck between a choice of two evils, pick the one you've never tried before!"

Write down your little problem and send it in a plain envelope to:

"Dear Yummy"
CU Amiga, Priority Court, 36-32 Farringdon Lane, London EC1R 3AU.



Is Knightmare everyone's worst dream or just Alex Doe's from London.

leads to a safe room with a key inside. On the other side of this area there is another false wall. Go through this wall to find a switch which opens one of the prison doors.

Inside the prison is a key-hole which opens an exit behind the false wall with the button. Now all you have to do is kill the hob-goblin and take the shield.

SIERRA - LOST IN THE POLICE FILES?

I am writing to you, not because I need help with an adventure game, but because I need help finding one. I have completed lots of the Sierra-On-Line adventures including, Larry 1, 2 and 3, Space Quest 1, 2 and 3 and Kings Quest 1 and 2.

I played these games on an Atari ST. When I heard that Sierra were no longer making games for the Atari I was shocked, so I bought an

are bidding to do the conversions (Kings Quest VI is quite likely to be one game on the cards).

WEEN

I am on disk three of Ween. I am in a place where there are three holes; a pendulum, three arrows and a walnut up a tree. In my inventory I have a flute, ring, three grains of sand, a tiara, copper ball and a necklace. What do I do next? Please can you help me?

Paul Newton, Newcastle.

This part of the game involves rescuing a fairy from a nut. I'm sure there is a sexist joke in there somewhere, but I can't think of it right now.

I assume you have a sword, even though you don't mention it. You must use the sword to cut the branches on the right, and the 'cursed' branch on the

GET SERIOUS

Get down on your funky bad self, take a look and be amazed at some of the best technical reviews ever seen in a magazine since...er the last issue really.

- 102 **QUARTERBACK 6.0**
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- 140 **ART GALLERY**



The CU AMIGA top rated accolade for non-games products scoring over 90%. They will definitely be worth the money and are likely to act as a benchmark for future releases.

Month:		Day:							Week:			Year:		
Jan	Feb	Su	M	Tu	W	Th	F	Sa	1st	2nd	3rd	4th	1994	Annually
Mar	Apr							1					Time:	
May	Jun	2	3	4	5	6	7	8					11:00	Hourly
Jul	Aug	9	10	11	12	13	14	15						
Sep	Oct	16	17	18	19	20	21	22						
Nov	Dec	23	24	25	26	27	28	29						
Monthly		30	31							Last				

Schedule Pro is the main addition to the package. You can use it to launch any script or program (including Quarterback of course) at any time up to 8000 years in the future!

QUARTERBACK 6.0

As more and more Amiga owners buy hard drives, the potential for them to lose data is ever increasing. Some sort of ordered back-up of data is the logical step, and no program has a better reputation for reliability in this area than Quarterback.

This latest version boasts quite a number of modifications, ranging from, functionally unimportant ones such as menus being tidied up, to major enhancements such as the addition of a new automated back-up mode.

The program is very easy to use. For starters, all infrequently used options have been taken off the main screens and tucked away in menus so that the main work area is as uncluttered as possible.

You can perform two types of back-up - Selective or Complete. It shouldn't take any great act of genius to work out the difference between the two Complete automatically backs-up everything on the selected device without requiring you to go through any of the selection screens. Selective on the other hand, gives you the option to specify the files to be backed-up. You can do this manually or by telling the program to only include those files which are new or have been changed since a certain date. In fact there is an entire backup filter screen where you can stipulate complex criteria for including and excluding any of the files in a back-up.

Once you've decided what data is going to be backed-up, you can also specify where and how it will be stored. You may choose to save to any device, and the data may be written as an AmigaDOS file, or in the program's format.

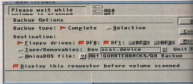
You can also specify the compression ratio to be used. The higher the ratio, the slower the back-up (and restore) speed. If you choose to back-up to floppy disks, the program can automatically spread the back-up across as many disks as the job requires. Fortunately the disks don't need to be pre-formatted so you can use new disks fresh out of their boxes if you like.

Incidentally, because Quarterback automatically spreads large files across as many as are needed, the program is also ideal as a way of transferring files bigger than 901k from one hard disk to another. Smaller files will fit onto a single disk anyway.

As I mentioned earlier, one of the most significant new program features is a nifty stand-alone program which will perform automated back-ups for you. Called Schedule Pro, the program can be used to automatically execute any DOS or Amiga program (including launching a full or partial back-up). Once loaded, Schedule Pro will sit in memory quietly clock watching, waiting to execute whatever programs are in its "Must do" list. The "Must do" list is a summary of the commands you've given it: anything from loading a program, to reminding you about someone's birthday. It can initiate commands hourly, daily, monthly, yearly or on a one-off basis.

Quarterback is already the *de facto* back-up program on the Amiga. Now it's become even more powerful and even more user-friendly.

Available from: Meridian Distribution, East House, East Road Industrial Estate, London, SW19 1AH. Tel: 081 543 3500. Price £74.95. **88%**



Quarterback is more than just an essential back-up tool! You can also use it for moving data around from one machine to another. Handy Eh?



T-SHIRT PRINTING KIT

A couple of years ago, we looked at a special ribbon from Core Electronics which let you print designs onto ordinary paper, and these could then be ironed onto a T-Shirt. The only problem was that ink and bubble jet owners couldn't use the system at all.

Now a new company has come up with an entirely different and more flexible approach to the job. Quill Marketing are distributing special paper which allows owners of virtually any printer to produce full colour designs which can then be ironed onto material, and let me tell you, not only does it work well, but the results look great!

There are four types of paper, one for dot matrix printers, one for ink jets, a third for thermal wax ribbon printers and a final type for desktop laser printers and photocopiers. The paper is very smooth to the touch and is actually a composite consisting of thickish backing paper and a semi-opaque membrane.

In theory, the paper is used exactly like ordinary printer paper in so much as you

MAGIC LANTERN

Tired at the seeming impossibility of the IFF Anim format to support high-quality 24-bit or AGA playback, Michael Todorovic (the author of Magic Lantern) has done what any self-respecting programmer would do: he invented his own standard.

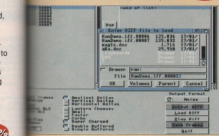
DIFF files use the best possible image compression techniques which enable much faster playback times – especially when used with “chunky” colour graphics. All 24-bit cards use chunky pixels, which means at last there is a standard animation system which will play on Opal Vision, Retina, GDA, Picasso II and will still support AGA and “normal” Amiga modes.

Creating animations is achieved via a single-screen editor program. If you have ever used SID or Directory OPUS, then Magic Lantern will hold no fears. DIFFs can be played back from the editor, but two freely distributable playback programs are provided. The first is a standard “load the entire animation into memory” player, but the second will spool the data off hard drive, which means animations are limited only by the size of your drive. The snag is that hard drives are never as fast as memory, so expect an A1200 with an IDE mechanism to stutter a bit when lots of colours are involved.

On the other hand, An A4000 fitted with a SCSI2 controller and drive will pretty damn close to RAM speeds, which will make budget TV studios very happy. Even better is the facility to synchronise the video to a sound sample, which opens some amazing multimedia applications: imagine storing an entire episode of *Red Dwarf* on your A1200's hard drive.

Available from Terra Nova Development,
PO Box 2202, Ventura, California 93002-
2202 Tel: 0101 805 652 0531
Fax: 0101 805652 1639 Price: \$95.

90%



feed it into the printer and print on it just like any other type. However, because the porous membrane takes a long time to absorb ink jet ink, if using this type, you'll need to set up your printer preferences to take account of this, especially when printing large areas of solid colour.

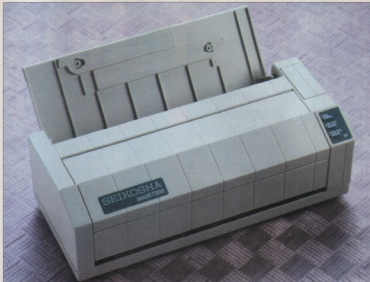
The first time I tried to print a screen with a Canon BJC-600, the ink remained liquid on the surface of the page, and consequently ran all over the place to produce a murky mess. The second time, I reduced the print density to its minimum setting and the paper was able to cope with the reduced ink volume. The image was still far short of what I could have produced on ordinary paper, but unless you inspected the results closely, the result was still impressive.

This is one of those rare occasions where dot-matrix owners are at an advantage because ribbon ink doesn't run, so the end results are perfectly sharp. Owners of expensive

thermal was can apparently expect photo-realistic output, even without the sublimation option for their machine. I don't have one of these printers available for test, so I'll just have to take it on trust.

Monochrome printers (or lasers) can be used to print an outline and this can then be coloured in by hand with water-based or permanent markers. You can even use pastels.

The next step is to leave the ink to dry completely if you used a bubble jet printer and when that's done, the image needs to be cropped so that your T-shirt doesn't have a white border. Having done that, place the paper upside down on the T-Shirt and iron away. It takes about a minute to do the job, but despite the warnings on the instructions, the process is very forgiving of mistakes. I took too long to peel the backing sheet off, but so what? Just re-heat the remainder and finish the job.



SEIKOSHA SPEEDJET 200

The Speedjet is Seikosha's attempt to get into the ink jet market. At only £250 excluding VAT it's pitted directly against Canon's BJ10, Star's SJ48 and even the Kodak Diconix printers. However, unlike those machines, the Speedjet is rather too large to be described as a portable, and in any case, it can only run off the mains.

The printer has quite a reasonable specification given its price: maximum print speed of 180 characters per second, maximum resolution of 300 dots per inch and five resident fonts (if you classify two italic ones as separate fonts).

The printer comes with HP Deskjet emulation as the default, but amazingly it doesn't support any more common printers as standard. You can get optional cards which offer Epson LQ or IBM Proprinter emulation, but these are not free.

This is a real pain because the Amiga doesn't come with drivers for this printer as standard, so unless you manage to track one down (perhaps from a PD company or from Hewlett Packard themselves) you're never going to get the best out of the printer. Unfortunately, I was unable to locate exactly the right driver and had to use the standard Deskjet one instead.

Text printing was fine; whizzing along at 180 characters per second in draft mode, the text is perfectly legible, if not exactly perfect. In letter quality mode, the text was naturally considerably better quality, and at 120 CPS still acceptably fast for a home machine.

The main problems occurred when I tried to print graphics. It was at this point that discrepancies in the drivers revealed themselves, for I was unable to achieve a resolution above 75 DPI. This meant that all graphics looked very coarse, and grey scale shading looked really awful. Despite trying every available resolution, both Deskjet drivers and altering the printer's hardware settings, the results looked really hideous.

Experience teaches me that at 300 DPI (laser printer resolution) the graphics output should be sharp and legible, but as Seikosha don't provide an Amiga driver I never saw it in all its glory.

Available from: Seikosha UK Ltd, Unit 14, Poyle 14, Newlands Drive, Colnbrook, Slough, Berks, SL3 0DX. Tel: 0753 685 873. Price £235 ex VAT.

65%

If you're using the ink jet paper and you own a turnable drier, popping the finished article into the drier for a few minutes will increase its fade resistance, and help to fix the ink.

The end result is as professional as any commercial T-shirt art. The image fades as if it's on some kind of rubberised backing, and can be washed exactly like any other item of clothing. Because ordinary ink fades a bit after a few washes, you are strongly advised to use fade-proof ultra-violet resistant ink.

At last it's truly possible to achieve completely professional looking output, without spending a fortune for it. This product is so easy to use that a ten-year-old could produce respectable results.

Available from: Quill Marketing, 11 Hemmings Close, Norwich, NR5 9EH. Tel: 0603 748002. Price £6.95 for four sheets.

83%

Full motion video



Up until recently, the thought of being able to view feature

films stored on a standard compact disk was considered "pie in the sky" stuff but not any more - Jason Holborn gets a taste of the future with Commodore's new CD-32 FMV cartridge.

MOVIES, MOVIES, MOVIES!

As is the case with all new technology, the success of the VideoCD format will undoubtedly rest on the industry's ability to convince the top movie studios that it's going to be worth their while releasing top film titles on VideoCD. After all, what's the point in having an "all-singing, all-dancing" bit of video wizardry if there's nothing to play on it? Thankfully, this shouldn't prove to be too much of a problem as many movie studios have already expressed an interest in the format. Already such big names as Disney and Columbia have allegedly signed their names on the dotted line. If all goes well, we should see top titles such as *Jurassic Park* and *Last Action Hero* making their way to VideoCD. The price of VideoCD movies is still being argued over but it seems likely that they will range from £15.99 to £19.99 for the really big titles.

Just to get the ball rolling, Philips paid Paramount Pictures vast sums of money to get them to release a number of their top titles on VideoCD so that Philips would have something to show on their own FMV-equipped system, the CDI. Thanks to MPEG-1 being an industry standard, however, CD32 owners can reap the rewards of Philips' investment too. Here's a list of the titles that were either available or planned at the time of going to press.

Top Gun - Naked Gun 2 1/2

The Hunt for Red October - *Patriot Games*

Wayne's World - *Ghost*

Fatal Attraction - *The Untouchables*

Raiders of the Lost Ark - *Indecent Proposal*

Indiana Jones and the Temple of Doom - *Beverly Hills Cop*

Star Trek I - *Witness*

Star Trek 6: The Undiscovered Country

This may seem a rather small list, but it's impressive none the less when you consider the small size of the VideoCD market at present. This list doesn't include the large number of music VideoCDs that are being released either - titles such as Bryan Adams' *Waking Up the Neighbours* and Bon Jovi's *Keep the Faith* are only a small selection of what is promised. Finding a stockist that handles VideoCDs is bit of a problem at the moment - the only company that we could find that had any VideoCDs in stock was

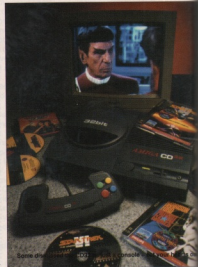
Gordon Harwood Computers who kindly loaned us the movies featured within this article. Gordon Harwood Computers stock the full range of VideoCDs listed above. For more information, contact Gordon Harwood Computers on 0773 836781.

Just a few of the many titles available on VideoCD.



It's been a long time coming, but finally, Full Motion Video (FMV to the boffins) is a reality on the Amiga thanks to the launch of Commodore's new FMV cartridge for the CD32. Unless you make a habit of keeping a watchful eye on either Philips' CDI or indeed the PC multimedia market, chances are that you may not have encountered FMV before. The basic idea is that by simply plugging an FMV cartridge into the back of your machine, the CD32 is suddenly transformed into a state-of-the-art FMV unit capable of playing movies direct from standard Compact Disks (CD).

Commodore have tried on several occasions to come up with their own FMV solutions in the form of CDXL and AVM, but neither managed to quite reach the sort of quality required to match a conventional VHS player. Now that the industry has agreed on the MPEG-1 standard for CD-based FMV movies, however, Commodore have jumped on the technology required to take advantage of it in double-quick time. Unlike CDXL, FMV movies are certainly no poor relation to a conventional VHS video player - most FMV movies match and (in certain cases) even surpass the picture quality of a swish Super-VHS video player. Combine this with the high quality sound that is the hallmark of the CD medium and you've got a home entertainment system that can trade punches with any consumer video player.



THE MOVIE GAME

Commodore's FMV unit consists of a rather bland-looking sealed box of electronics that contains all the necessary hardware to decode and display the compressed MPEG video signals stored on a VideoCD - the heart of this silicon beauty is a 40MHz video decompression engine which is backed up by an equally poky 28MHz DSP chip (at last, DSP makes it's way to the Amiga).

Installing the FMV cartridge inside your CD32 is pretty straight forward, all you have to do is to remove the single screw that holds on the CD32's back panel, slide in the FMV unit until it fits snugly inside your CD32 and then fix it into place using the screw you removed earlier. Such operations always sound a lot easier on paper than they actually are in practice but thankfully this is one upgrade that even the greenest beginner could probably handle.

Once you've got the FMV unit safely installed, you'll probably want to try it out to see what all the fuss is about. Commodore thankfully include a disk with the FMV unit that shows it off, but you'll need to buy special MPEG-1 disks to be able to really see it in action. If you load a normal CD32 disk that doesn't take advantage of the FMV unit, the cartridge's presence will be completely hidden. In theory at least, any standard MPEG-1 disk should work on the CD-32 FMV unit even if the CD32 isn't specifically mentioned on the disk's packaging. This isn't true of all MPEG disks, however, any disk that is interactive (an FMV game like 7th Guest on the CDi, for example) will not work. For general movies, however, compatibility should be very high indeed.



It's square, it's slim, it's a Full Motion Video cartridge.

POPCORN TIME!

Playing an MPEG movie such as those that are currently available from Philips (a full list can be found within the box opposite) is very simple indeed. All you have to do is to place the first disk into the CD32's drive, reset and after a couple of seconds a selection screen appears that lists all the available movie tracks. Surprisingly, although most MPEG movies are broken up into separate tracks (act one, act two etc), this selection screen usually shows only two tracks – the movie company's ten second trailer and the film itself.

Splitting an MPEG movie up into a series of separate tracks does allow FMV one major advantage over a conventional VHS video player; instant access to any section of a movie. Say, for example, you wanted to watch only the last 15 minutes of your favourite film. If you were to watch it on a VHS player, you'd have to manually – and rather haphazardly – wind the tape forward until you found the section you were interested in. With FMV, however, you can instantly skip to the section of the movie that is closest to the bit you wanted to watch. The other great advantage of FMV is its freeze-frame facility because the FMV unit works with digital data, freeze-framed screens are always rock solid with none of the 'jitter drop outs' and the loss of picture sync normally associated with VHS tapes.

PROBLEMS

FMV is not without its problems, but these are imposed by current limitations in available technology rather than Commodore's FMV cartridge.

The picture quality of FMV movies is so good that it'll make your eyes pop out! Top Gun's Tom Cruise appears to be suitably impressed.



FMV EXPLAINED

The high-brow inventors that have been responsible for many of this century's great inventions – the CD player, the television, the VHS video recorder etc – have been dreaming about squeezing full motion video pictures onto CD for many years now but it wasn't until 1988 that development began on the MPEG-1 technology that forms the heart of the CD-32's FMV cartridge. Developing such high technology proved to be just too much for even the likes of the massive Japanese conglomerates that dominate the consumer electronics market and so, under the direction of a very forward thinking chap by the name of Leonardo Chiariglione, an alliance of over 200 different companies set to work on the MPEG-1 technology.

The development of MPEG-1 owes a great deal to the existence of the JPEG image compression standard which has already found its way onto the Amiga within image processing programs such as ASDG's Art Department Professional. Adapting the JPEG standard to work on FMV was certainly no mean feat, after all, JPEG is designed for single static images, not a whole series of moving images that have to be decoded and displayed at a rate of 25 frames per second. The MPEG group finally managed to adapt the JPEG standard using a technique that is rather similar to the system used within the Amiga's own 'Anim' IFF file format. The basic theory is that MPEG frames are not compressed in their entirety – instead, only the discrete areas of a frame that differ from the previous frame are compressed along with a series of vectors that tell the MPEG hardware where the small compressed sections are to be placed onto the screen. The rest of the image is simply borrowed from the previous frame.

There's obviously a lot more involved but the upshot of all this video trickery is a staggering compression ratio of around 100:1 with each frame being decompressed and then encoded into a video signal in less than 150 milliseconds. The development of MPEG isn't stopping here, either – already the biffins are hard at work on an MPEG-2 and MPEG-4 standard, the latter of which could end up being used by communications companies such as BT for video telephones and teleconferencing. The great thing about FMV is that it is modular and so enhanced versions of the MPEG standard could be added whilst still providing full compatibility with the existing MPEG-1 disks.

The VideoCD format really is aimed at the consumer that wants a high-quality alternative to VHS. But the inability to record your favourite songs onto a MPEG disk will stop VideoCD from taking over from the VHS video recorder altogether. No doubt it's only a matter of time before the biffins manage to produce FMV units capable of 'encoding' video on an MPEG disk but don't hold your breath – I personally wouldn't expect to see this sort of technology being made available (and affordable) for another two years and even then that's being rather optimistic.

Unlike standard audio CDs, VideoCDs are a lot



With the arrival of FMV, the Amiga CD32 boldly goes where no games console has before.

more susceptible to dirt, dust and grease too so it's important that you look after VideoCDs – I recently attempted to play a VideoCD which refused point blank to be recognised by the CD32 – after several minutes of head-scratching, I eventually found that the problem was being caused by a very tiny fingerprint on the CD's surface. Audio CD player's don't really care about this sort of thing because less data is being processed and the timing is less critical but FMV players absolutely hate even the smallest smudges!

Gripes aside, I can honestly say that Commodore's FMV unit is easily the most impressive (and certainly the most important) product to hit the market for many years. Combine the CD32's obvious power with its impressive price advantage over the competition (a similarly equipped CDi system will cost you more) and Commodore have a sure-fire hit on their hands. Let's just hope that both the major film studios and Amiga software developers jump on the bandwagon so we'll get not only some great MPEG films, but some great MPEG games too! **CU**

COMMODORE £199.95

CD32 ONLY

COMMODORE HOUSE, THE SWITCH-BACK, GARDNER ROAD, MAIDENHEAD, BERKSHIRE SL6 7XA. TEL: 0628 770088

EASE OF USE

Once the FMV unit is installed, running MPEG disks is child's play.

VALUE FOR MONEY

May seem rather expensive but this is leading edge stuff!

EFFECTIVENESS

Brilliant picture quality, rock solid freeze frame and CD-quality sound. What more could a video buff ask for?

FLEXIBILITY

At the moment it's restricted to playing films but there's no reason why software developers couldn't produce interactive FMV games!

INNOVATION

This is absolutely state of the art technology, there's nothing else on planet Earth that even comes close!

“ Easily the most important Amiga product to be released for years. ”

OVERALL

98%

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Multimedia on the cheap?
John Kennedy puts
two budget-priced video
and audio systems,
head to head.

As we are all dragged into the world of multimedia, it becomes increasingly clear that the two areas of graphics and sound are coming closer and closer together. Two companies have released budget-priced hardware to capitalise on this trend – VideoMaster and Sound And Vision. Although both have similar specifications, they work in totally different ways, CU AMIGA put them to the test...

VIDEOMASTER



Real-time moving computer video is still a dream for many, but HiSoft are doing their best to make the dream a reality with the release of VideoMaster A/GA. Originally, a much under-rated A500-only peripheral from Microdeal, HiSoft have

taken over the hardware and added a PCMCIA slot. My major criticism of the A500 unit was the fact that it tied up the expansion slot on the side, preventing the use of any extra memory or hard drives – both an essential when dealing with moving video. Now on the A1200, using the PCMCIA slot is fine by me: most expansions can be done internally. It's possible to fit huge hard drives, 68030 accelerators and ridiculous amounts of RAM without even touching the PCMCIA slot.

The good old A600 also sports a card slot, and VideoMaster will work fine with it too. Of course, a hard drive or extra memory isn't essential to use VideoMaster, but boy they're a good idea. When you start to digitise frames at the rate of 25 a second with a good quality soundtrack, 6Mb of RAM soon starts to be a limit. And it won't take long to fill an 85Mb hard drive either with data files of this size. Did I say 25 frames per second there? Yup, sure did – VideoMaster will grab frames at 25, 12 and eight per second or slower, directly into memory with an accompanying soundtrack. On an A1200 with an extra 4Mb of RAM, this allows for well over 600 frames. The images can be replayed at any speed which makes for some interesting viewing. VideoMaster is the cheapest piece of hardware that passes the "juggle test" – a particularly strict benchmark I devised myself.

Before you start talking acronyms such as FMV, CDROM and MPEG, bear in mind that VideoMaster's images are quarter screen 16 shade grey scale, which is far from VHS quality. They are, however, big enough to be recognisable, and a sound and vision head-and-shoulders

ONE on ONE



VideoMaster can grab in 16 colours.



A good way of testing the speed of a digitiser is to grab a sequence of a juggler. Working at 25 frames per second, I found VideoMaster, above, to be the clear winner in this contest above Sound and Vision left.

As there is a perfectly good image grabber in the VideoMaster box, it's only a matter of software to get full-screen pictures.

A gadget in the software brings up a full-screen grab menu which offers mono and colour, low and hi-res grabbing, with or without interface.

Colour grabs can be achieved by placing the supplied coloured filters in front of the camera lens, but best results are achieved using the optional electronic RGB colour splitter. The auto button on the control screen uses the splitter automatically which makes the process simpler.

CONCLUSION

Overall, the VideoMaster software is extremely good. The card-based screens with big embossed buttons are excellent, and even the rather tricky video sequencing screen can be used quickly.

Sound editing and video special effects are thin on the ground, but as memory is rather critical it makes sense to keep second options out of the main program. There are plenty of other PD and commercial programs around which will do the job.

If I have a bone to pick, it's with the memory

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VALUE FOR MONEY

Not only do you get a full-screen grabber and a stereo sound sampler, but full motion video as well. ♦♦♦♦♦♦♦♦♦♦90%

♦♦♦♦♦♦♦♦♦♦85%

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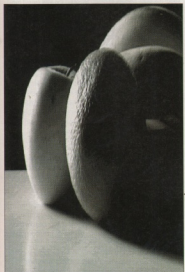
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A budget priced piece of multimedia hardware that deserves great success. Terrific fun.

OVERALL 90%



Sound and Vision can also grab in 16 colours with very little difference to VideoMaster.



The main control panel for VideoMaster features both an easy-to-use frame select drag bar, and a full audio-editing suite.

shot of a talking person is an amazing sight to behold played on an Amiga. The software includes a vaguely MED-esque sequencing program, which will allow short snippets to be ordered and played back to make your own scratch video. Apparently it's been used on MTV, so it's certainly good enough.

HOLD STILL

Rather than call it a day with black and white video, HiSoft have decided to take the VideoMaster one-step further and offer full-screen grabs in colour as well as black and white.

» management. Although the software will inform you how many frames you can store, and how much memory is available for sound, it won't automatically balance them. This means it takes a lot of trial and error to maximise your system.

The other problem with the software is with file formats. Although sound samples and still images are stored in normal IFF format, moving video and film files aren't. This means you can't load a short video sequence into *Deluxe Paint* as an Anim. The programmers have promised IFF-Anim support by the time you read this, and I for one am eagerly awaiting it.

There is a tremendous amount of scope in terms of multimedia applications as there are many Anim players available which can even play and spool files off hard drive at the same time. Some will even synchronise a sound sample. When IFF files happen, *VideoMaster* will truly be the cheapest piece of real multimedia hardware around. At present, the stand-alone playback program is still enough to impress your friends.

SOUND AND VISION

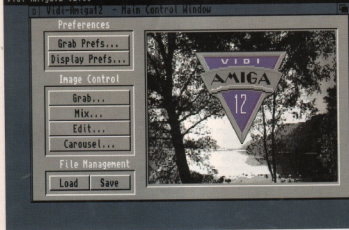
At first glance the Rombo *Sound and Vision* digitiser is a bit of a cop-out. Although they have managed to fit both a VIDI12 and a MegaMixMaster inside the same case, the software remains completely the same. You get two disks, two manuals – they are in effect, two completely different products.

The only real advantages are cost and convenience – there is no way of using both video and sound hardware simultaneously, as on the *VideoMaster*. Both pieces of hardware have been dealt with in past issues of CU AMIGA, but a quick review of the features here won't go amiss.

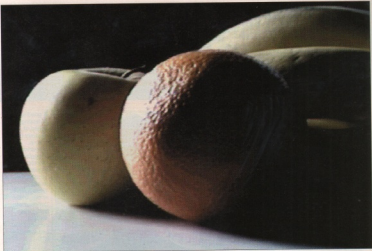
GRAPHICALLY SPEAKING

The graphics part of the *Sound and Vision* team are handled by a VIDI12 digitiser. This unit will grab individual single-colour frames from a video signal in 16 shades. As it includes an electronic colour splitter, this means it can grab a full colour 12-bit image very quickly indeed.

Video-Mixg12 V2.04



VIDI's main control panel allows grab and display resolutions to be set. Audio sampling is done from a different software package altogether.



The driving software is very slick, and will quickly stuff as many pictures into memory as possible. Colour images can be created in just about any Amiga screen mode – including the new AGA modes – and saved to disk for later mutilation in art packages.

A host of image processing filters are included, but most are for creating novel special effects rather than any serious image manipulation. Although an entire frame can be grabbed, VIDI12 can't pass the data through the parallel port particularly quickly. This is a feature of the parallel port rather than a failing of VIDI, although it does mean that live 25 frames a second sequences are out of the question. VIDI fails the juggle test, and is therefore best suited to stills or time lapse sequences.

In terms of image quality, VIDI seems to have a slight edge. In bad light, the Rombo digitiser gave superior results with considerably more stable edges and better colour. However, the example picture of some fruit taken in good sunlight with an identical camera should go some



These scenes, shot in daylight with a composite video camera, show both digitisers in full-screen HAM6 colour. Both contain about the same amount of detail, although the VIDI output top left has slightly better colour than the *Sound and Vision* output bottom right, the printing process may exaggerate differences.

way to demonstrating that there isn't a great deal to choose between them.

VERY SOUND

Also nestled in the compact little box is a MegaMixMaster stereo audio sampler. This is a standard 8-bit device with a 3.5mm stereo input jack. The software provided is one of the easiest to use sampling packages. It mightn't offer any stunning direct-to-disk effects or studio quality editing features, but it's crammed with nice touches. The twin oscilloscopes ensure you have the input level settings right, whilst the real time effects will provide 15 minutes of fun as you recreate great Karaoke moments of last year's Spanish holiday. Home keyboard fans will enjoy the MIDI support, which will allow the easy addition of sound effects into compositions.

As we've already covered MegaMixMaster in detail in past issues, there isn't really a lot more to say. The software is good, and the hardware certainly above average in terms of sound quality.

CONCLUSION

By squeezing the two digitisers into one box, Rombo have hoped to provide the best of both worlds. Good graphics and good sound – put them together and what do you get? Well, at the

COMPARISON CHART

VIDEOMASTER S & V

Image quality	***	****
Sound quality	**	****
Features	****	****
Ease of use	*****	****
Build quality	***	*****

Primary Connection	PCMCIA	Parallel
--------------------	--------	----------

AGA support?	Y	Y
Sound & graphics simultaneously	Y	N
OverScan?	N	Y
Image processing?	N	Y
Sound effects?	N	Y
S-VHS input?	N	Y
Stereo sound?	Y	Y
Sound resolution	8-bit*	8-bit
Graphics resolution	12-bit	12-bit
Electronic Colour Splitter?	Option	Internal
Alpha	N	N
TimeLapse (monochrome)	Y	Y
TimeLapse (colour)	N	N
Price	£79.95	£129.95
Colour splitter	£89.95	(Included)
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*Over-sampling gives near 8-bit sound

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TELEPHONE: 0506 414631

EASE OF USE ☒☒☒☒☒☒☒☒☒☒

Both software packages are well thought out, and look good. Internal RGB splitter is used automatically.

VALUE FOR MONEY ☒☒☒☒☒☒☒☒☒☒

Saves you a tenner over the combined cost of each digitiser.

EFFECTIVENESS ☒☒☒☒☒☒☒☒☒☒

Excellent quality, both grates and sounds are first class.

FLEXIBILITY ☒☒☒☒☒☒☒☒☒☒

Software provides timelapse and sequence grabbing.

INNOVATION ☒☒☒☒☒☒☒☒☒☒

There is nothing particularly clever about putting two peripherals in one box.

Two good, proven peripherals in one box. If you already have either a sound or video digitiser, get the individual parts instead.

OVERALL 80%

When grabbing full-screen images, VideoMaster requires extra old frames - although in this case the distortion is an improvement.



COLOUR

Digitising a monochrome video signal is quite simple: the timing information at the start of the frame is detected, and then the rest of the signal is digitised with a fast Analogue to Digital converter. The values from the A/D chip correspond to the brightness levels of individual pixels in the picture.

Capturing colour is only slightly more difficult. As any good video boy scout knows, every pixel in a colour image can be reproduced as long as you know the relevant quantities of Red, Green and Blue light. It follows that to digitise a colour image, you need to separate these colour components out and then digitise each individually. When the amount of Red, Green and Blue is known, the Amiga colour pens can be set and the image re-displayed in colour.

As each colour needs to be separately digitised, the system requires three video frames with which to work. If these frames differ from one to the next, the result is a blur of colour. This means the image must remain completely static. Using coloured filters in front of a camera can present problems, as it can take several seconds to finish the grabs. In fact, trying to grab a moving person or passing car in this way is impossible.

With an automatic electronic colour splitter all three grabs are done in quick succession, which means it is just about possible to grab from very slowly moving scenes. If your video recorder has a perfect - and I mean digital-type perfect - freeze frame, good colour stills of moving images can be grabbed. A Y/C digitiser such as VLAB works slightly differently - it samples the entire composite video waveform, which consists of the colour information as well as normal brightness and special timing or sync signals. Using software, it then calculates the colour components mathematically. It can take a good few seconds before the image is presented on-screen. The advantage to this method is that the entire video frame is sampled in one go, and so there is no need to grab three different frames and risk movement and subsequent colour blurring.



The effects of movement can be catastrophic when grabbing a colour image over several frames. The Red, Green and Blue components each differ slightly from frame to frame causing multiple coloured images and possible image blur.

moment good graphics and good sound.

If you want to combine the two you are really on your own, as there is no supplied software to do it. A lot of Amiga owners will already own a sound sampler, in which case the only real benefit is the reduction in the number of times the one parallel port gets used.

OVERALL

Although the specifications for both VideoMaster and Sound and Vision are similar, in use they couldn't be more different. VideoMaster integrates moving video with sound perfectly, with good quality grabbing added almost as an afterthought.

On the other hand, the Rombo unit is really two different peripherals sharing the same box, with no cross-over between them. As a result, it can manage still graphics and sound with slightly better fidelity. The ultimate decision of choice between VideoMaster and Sound and Vision depends on the applications the potential buyer has in mind.

In terms of multimedia, the VideoMaster is an extremely exciting product.

Interestingly, the VideoMaster provides support for an external sampler to handle sound and the MegaMixMaster made a big improvement when it was used instead. A case of two rivals helping each other out? **CU**

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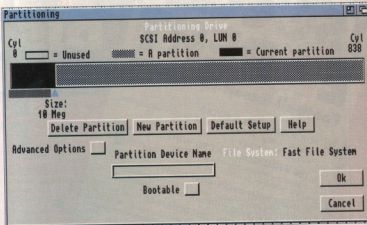
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Overdrive 35

Now, thanks to Overdrive 35, you can add a large hard drive to your A1200 or A600 and still leave your warranty intact. Mat Broomfield looks at this very promising product from France.

When we first previewed the Overdrive in the October issue of CU AMIGA, I was very enthusiastic about it and congratulated Software Demon on coming up with one of the most innovative 1200 products so far. Since making those comments based upon the pre-production models, a lot has changed, so we thought it was time to give you the full update.

IN THE BEGINNING

Overdrive 35 is an IDE hard drive which connects to your Amiga via its PCMCIA (smart card) slot. It's revolutionary as it's the only hard drive to connect to the Amiga in this way. The beauty about using this connection method, is that the drive can be

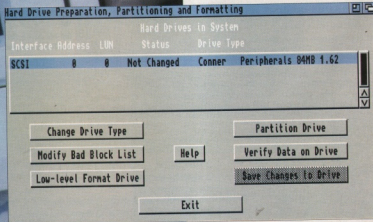
plugged and unplugged as often as you like without affecting your repair warranty, so if something else does go wrong, you won't have to worry about some snotty repairman telling you he can't fix your computer because you've fitted a drive and invalidated your warranty. Better still, not only does the Overdrive connect externally, it also runs between two and four times as fast as Commodore's recommended internal drives.

So what's the problem? Well, it seems that since I took a look at the early prototype drives (which worked perfectly but didn't autoboot) a number of problems have arisen in large scale manufacturing. The drives are constructed by Archos in France, and distributed by Software Demon over here. It seems that the first 1,000 drives to come off the assembly line were faulty. Unfortunately, each of the three review models I received at CU AMIGA were taken from this batch. The drives appear to work normally until you attempt to do a lot of reading and writing to them, or you accidentally interrupt the initialisation sequence. In either case, the drive crashes, and may then crash intermittently for a few hours. As if that weren't bad enough, the actual data on the drive became corrupted if the crash occurred whilst data was being written to the drive.

As you can imagine, after several months of this, I'm not feeling as disposed towards the drive as I originally did. To make matters even worse, everyone I speak to says that they're not having any problems with their units.

Eventually, a few days ago I received another version of the drive, and this time it seemed to work perfectly. Software Demon tell me that

Overdrive comes with a much modified version of Commodore's HD-Install program which can be used to partition the drive and copy a version of Workbench onto it for you.



they're desperately trying to locate and recall all faulty drives, but they have no way of finding out whether or not a customer has a faulty unit unless the customer complains.

Anyway, back to the latest drive that I have received. Physically it doesn't look any different to any other hard drive. However, for the last hour and a half, I've had Power Computing's Disk Expander continuously compressing and decompressing thousands of tiny files.

This is a particularly strenuous task to subject the drive to because it involves rapidly alternating between short duration read and write operations. So far, not a single crash, so I'm starting to gain some confidence in the unit now.

GET ON WITH IT

So anyway, whilst the drive continues, I'll just tell you exactly what you'll get for your hard earned cash. Depending on the capacity you purchase, you'll receive an 80-540Mb drive.

This unit is a 428Mb model made by Western Digital, but the exact mechanism depends on the size that you order, and the availability.

Software Demon tell me there's a chronic shortage of small (less than 200Mb) capacity drives at the moment, so if you want one of those you may have to wait. However, you can be sure that you'll receive a mechanism from a reputable manufacturer such as Western Digital, Seagate or Connor.

The drive is housed in a white plastic case which matches the curves of your A1200. Included with the drive is a program disk that contains the special AQ Set Up software, as well as a number of related utilities.

The drive is pre-formatted and has a version of Workbench already installed on it. All you have to do is plug it into the side of your A1200 and turn the power on. The drive comes with its own

VARIABLE SPEEDS

One of the earlier problems with the Overdrive was caused by the fact that the PCMCIA slot and the drive's controller were not able to synchronise the rate at which data was read from, or written to the drive. As I've already mentioned, the Overdrive itself is extremely fast; unfortunately, most of the mechanisms being used, whilst well made, are just not up to the standards set by the controller card. This was one of the reasons for frequent crashes that occurred. Software Demon came up with an elegant solution which is to add a software speed setting in the AQ install program, so that you can adjust the drive to the speed of the mechanism. In theory, this should be factory set when you receive the drive, but it's nice to know that you still have the option to adjust it if you need it.

power supply, but also draws power from the PCMCIA slot.

The drive is pre-divided into two partitions, one of about 7-13Mb (depending on the drive capacity) and the other which occupies the balance of the space. The partitions have default device names of "AQ0" and "AQ1". The manual recommends that you don't alter these partitions; a sentiment I heartily endorse as each time I altered them, the drive gave me nothing but trouble afterwards. Only trouble is, the boot partition can soon fill up, especially with a large capacity drive.

The drive is controlled by the Amigadev device, a controller built into the card. This device identifies itself with a little "AQ" icon, which, to my irritation, is ever present on the workbench screen.

VARY SPEED

As I've already mentioned, the installation software can be configured to work with normal, medium or fast drives. The setting that you use will determine the maximum data transfer rate. I used the slowest setting just to be absolutely safe, but even so, I managed to get a very respectable 1430K per second that's nearly 1.5Mb a second, and that's on a slow model Compuserve that to the 900k a second that my GVP A530 Turbo used to do, or even the



Software Demon are also going to be marketing a portable version of the drive which uses an IDE drive mechanism. It comes in a tiny black box and doesn't require a power supply. It can be easily slipped into your pocket and can be plugged into any 680 or 1200.

809K per second that my (fastish) internal IDE drive does and you'll get the picture; this is a seriously nippy drive!

Another good thing about the Overdrive is that it will quite happily co-exist with an internal drive if you have one. Because you can specify the boot priority, you can assign the boot to any partition, or simply leave your internal as the boot device.

However, the Overdrive is not so accommodating when it comes to expansion devices plugged into the internal trap-door slot. It can argue quite terminally with some of them. I have a Siren Turbotech 4Mb expansion board, and the hard drive works just fine with it. When I plug in my A1230 II, the drive won't boot, and the whole computer just sits there hopelessly locked up.

Software Demon tell me that the reason for this is that the peripheral manufacturers have mapped their device drives (especially those controlling RAM above 4Mb) into PCMCIA address space. This means that when a PCMCIA device is plugged in there's a device conflict and the whole caboodle falls on the floor waving its little legs in the air!

I can't confirm whether or not this is true, but if it is, it shows very lazy development on the part

JARGON BOX

CONTROLLER CARD: The electronic interface that acts as an interpreter between the Amiga and the drive. Normally a controller is not needed for an IDE drive, but as this one is connecting to the PCMCIA slot instead of an IDE interface, it is required.

HARD DRIVE: A special type of disk drive which contains high capacity, non-removable disks. These disks spin at great speed and are far faster than floppy drives. Typical hard drives contain anything from 20-100MB of data; that's the equivalent of approximately 23-1150 floppy disks!

IDE: Integrated Drive Electronics. The term refers to a type of hard disk drive which contains its own built-in controller card.

of these other manufacturers. It's not true, then Archos are the ones who are guilty of insufficient product testing, and they need a swift boot up their Gallic bottoms...

Anyway, the upshot of this, is that I have a 428Mb hard drive and a 50MHz 030 accelerator, but I can only use one of them at a time. Bummer.

CONCLUSION

Well, this has been a very difficult product to review. On the one hand it's a potentially superb piece of kit, but on the other hand, it had a rather troublesome birth. However, to be fair, I can only review the finished product, and I shouldn't hold their development tribulations against them.

The unit I have here has read and written

gigabytes worth of data now without so much as a twitch. I did experience a device failure when I reset halfway through a boot, but then even a non-hard drive Amiga crashes under those circumstances.

The drive is very fast, and quite reasonably priced. However, I don't get the impression that it's particularly sturdy, and it would probably fall the ultra-stringent American FCC regulations. Nevertheless, if I had the choice between using the drive or my super-fast accelerator, I'd stick with the drive and that, my friends, should tell you something! **CU**

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OTHER STUFF

- Free Disk - 1.950
- 150 Legal Tools - 1.125
- Assessments Games - 1.160
- 150 Grapapine Disk Magazine Issue 18 (3 disks)

South Lincs PD

Large selection of Amiga PD (Over 2,000 disks) including: Games, graphics and Animation, Utilities, Music, Demos, T-Box, Fred Fish Games 1-880, Assassins Games Disks 1-108 Below is a small selection of titles available

AMES

- 1021 Air Warrior (Flight Sim)
- 1151 Orbital & Card Sharp
- 1157 Total War (Risk) (AGS)
- 1161 Battle Cars (2 Disks)
- 1167 Amiga Chess
- 1170 Space Wars (2 Disks)
- 1181 Dungeons of Pandemonium
- 1183 Intrepid
- 1187 Mind Via 4 (Puzzle)
- 1200 Taimon (Action)

UTILITIES

- 4087 Channel V2 (AGS)
- 4100 Test Plus (2 Disks)
- 4110 MED V2.1 (Music Editor)
- 4136 Sound Tracker 2.0
- 4181 Epoch V1 (2000 year calendar)
- 4183 Learn A Plus Plus
- 4186 A Game V4.18
- 4187 Bambi V1.5
- 4190 IQ Challenge (AGS)
- 4173 King 1.3 (AGS) Emulator
- 4177 Ming 1.3 (AGS) Emulator
- 4180 Bambi V2.3 (Net 1.3)
- 4186 Word War 1 (Hypertext)
- 4188 Crossed Chatter V1.8
- 4185 LUD 120 (PC Task V2.0)
- 4186 Capem Unlimited (C2000-1)
- 4187 Kickstart 2.0 (AGS) Emulator
- 4188 Assassins A1000 Flo Disk
- 4191 Super Voyager V2.4
- 4192 Animals & Color
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DEMOS

- 6876 Outlines (AGS)
- 6878 Just in Time (2 Disks)
- 6880 State of the Art
- 6882 X-ray View of Commodore
- 6884 X-ray View (2 Disks)
- 6101 TimeZone
- 6102 World Demos (2 Disks)
- 6103 Alpha & Omega (1 Disk)
- 6104 Russian Paraglider (1 Disk)
- 6105 Russian Paraglider (1 Disk)
- 6106 Russian Paraglider (1 Disk)
- 6107 Desert Demo (Kithers) (2 Disks)
- 6108 Mystery (Kithers) (2 Disks)
- 6109 Mystery (Kithers) (2 Disks)

MUSIC AND SOUND

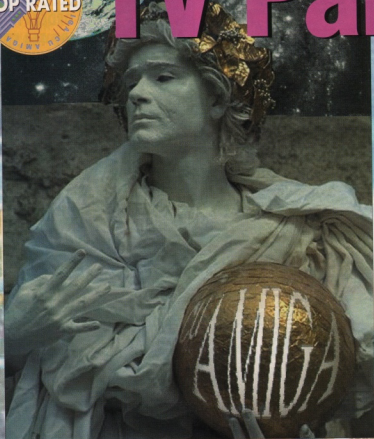
- 5045 Iron Maiden
- 5046 Guns & Roses (Your Crap)
- 5047 Van Halen (England)
- 5048 Bad Boy (England)
- 5049 Ultimate Demo
- 5050 The Top (New Demo)
- 5051 U2 Rattle and Bang (Net 1.3)
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GRAPHICS AND ANIMATION

- 2154 Gals of Sport Simulation
- 2156 Swamp Survival (2 Disks)
- 2200 Unpleasant Way to Die
- 2201 The First 300 (2 Disks)
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TV Paint 2



Composing scenes using different images is easy – simply lasso the section and paste it on. Notice how the CU AMIGA text is curved and shaded around the sphere. It took about ten minutes to finish the entire image.



How can a graphics program which doesn't run on a standard Amiga be so good?

John Kennedy draws his own conclusions.

You might think that the Amiga is pretty well served with paint programs, what with *Deluxe Paint* and the new office favourite, *Brilliance* appearing in every other issue. However, the plummeting cost of 24-bit cards suddenly means that yet another package is within the reach of a lot of new users.

TV Paint 2 is a paint program which won't run on the new AGA chipset. Nor will it run on the old chipset. In fact, the only chipset it will run on is an external 24-bit graphics card. That said, it will run on just about any system including AVideo, Domino, IV24, Harlequin, Retina, Sage and Picasso. It will also run on EGS systems, the recent "standard" in graphics cards (and about the closest to re-targetable graphics we're going to get).

Installation is easy – just plug in the dongle (whoops, there goes multi-tasking, thanks very much all you software pirates) and follow the instructions. Then click the icon and a big *TV Paint 2* logo appears on the Amiga's screen.

Now, looking at the output of the video card (preferably on a second multiscreen monitor), you can see what all the fuss is about. In the middle of the screen is a small tool menu, which you'll grow to know and love.

FEATURES

At first glance there doesn't seem to be a large number of features. After all, *Brilliance* has hundreds of stacking sub-menus to wade through. Perhaps the reason for this is that *TV Paint 2* was designed for the artist, not necessarily the computer user. Also, there is no support for animation, none at all – not really surprising since each screen can consume several Mb of RAM.

The *TV Paint 2* drawing tools work like any other program. Although the display is composed of real-time 24-bit colour, updates are incredibly fast. On my A4000/D30, *TV Paint 2* is far faster than both *Deluxe Paint* and *Brilliance* in HAM8 mode and it displays more colours. Speaking of speed, the file handling is absolutely superb: easily the quickest I've ever seen on an Amiga. The special 24-bit DEEP format can save images to hard drive almost as quickly as to RAM, and even the integral JPEG support is speedy. I tested it on an EGS card (the Spectrum) and the Harlequin 4000 card, and there was no noticeable difference in speed between the two. In fact, the cheaper

Left: This sort of abstract hogwash is really easy to produce. With 24-bit colour, palette clashes are a thing of the past.

JARGON BUSTERS

- **DEEP:** A relatively new image format, which takes advantage of the way graphics card store pictures in memory. Instead of using bitplanes like an Amiga display, a DEEP file contains the chunky colour information of the pixels for speedy loading and saving.
- **EGS:** The "Enhanced Graphics System" is a standard which several different video boards aspire to. An EGS card offers a user-definable resolution and any software with the correct EGS drivers will work on any EGS card.
- **JPEG:** A compression system that overloads pictures to a tenth or more of their original size by carefully discarding information which hopefully might not be missed. Using 24-bits (three bytes – one each for red, green and blue) a graphics card can choose colours from a huge range of 16 million.
- **HAMB:** The 262,000 colour mode offered by the new AGA chipsets found in the A4000, A1290 and C032.
- **VLAB:** The excellent video frame grabber from German company MacroSystems.
- **PISSARRO:** An Impressionist painter, born in the Virgin Islands the son of a Jewish-French shopkeeper. Enrolled at the Ecole des Beaux-Arts and Académie Suisse, He attended the prestigious Salon in the 1860s and between 1870 and 1875 he organised ten exhibitions in London. Eventually his style drifted from Impressionism to Pointillism.

EGS card had the advantage of displaying files on the paint screen.

Brush support is extensive, with box, lass and polygon clipping and all sorts of weird mapping options. Once you have the brush in memory, it can be distorted beyond recognition and also be quickly shaded and re-coloured. In fact, the use of colour support is amazing, the ability to choose from over 16 million colours unleashes some real power. Creating a light-sourced sphere takes only seconds to do and looks beautiful. You can even mix the perfect colour in a miniature artists' palette.

DARK SIDE

After using several Apple Macintosh programs, it has to be said there are a few areas where TV Paint 2 falls down. It would be nice to see a magic wand intelligent brush-cutter, and an easy way to copy one area of the image over another. Both are features which make dealing with scanned photographs a lot more fun.

To give the big boys a real run for their money, there also needs to be some image processing options. Convolutions are supported, but morphing, tipping and the like aren't.

In use, TV Paint 2 was remarkably stable. Generally when programs start to use 10Mb of

What's new with version two

- More support for Touch Tablets, with the ability to use pressure sensitive pens and airbrushes.
- Chalk and coloured pencil have been added to the airbrush. These provide a more interesting texture for shading and drawing.
- Brush modifications are better, with shrinking, enlarging, rotating and perspective control.
- A new transparency mode allows the picture in the spare screen to be rubbed through to the front screen. The Impressionism mode will make you an instant Monet, Renoir, Sisley or Degas.
- A link to VLAB to automatically import pictures for processing.
- ARXSP support has been improved.



Pissarro eat your heart out, this is a VLAB grab treated with the new Impression feature. Art Students spend years doing this sort of thing, you know.



The huge displays afforded by most graphics cards means the image and the TV Paint 2 menus can co-exist peacefully. The border can be used for mixing colours or playing with balls.



Album covers, get yer album covers here. I think I've discovered my vocation. The interesting speckly texture was a ceiling tile before Dan scanned it.

RAM at a time I expect to see the nasty yellow Recoverable Error on screen (which is usually a lie as it usually turns red and crashes). TV Paint 2 didn't lie to me once. In fact the only thing that went wrong was an occasional scatter of pixels under the cursor. These pixels weren't part of the real image as they weren't saved with the final picture, rather they seemed to be caused by the cursor corrupting what was underneath. It sounds awful, but in practice it wasn't a problem.

REQUIREMENTS

Although TV Paint 2 itself is relatively inexpensive, the hardware you'll need to run it isn't. For a start you'll need a graphics card (although that can be about £300 or less these days), then you'll need a fast processor (68030 or 68040) and you'll also need a huge amount of RAM and hard disk space. I have 14Mb of RAM on this A4000, and run out once or twice when using some really big images. If you can live without an UNDO buffer and lower resolutions you can get away with less. A "big edit" feature will allow a file that's much too big to be loaded and processed in sections.

CONCLUSION

I wish I'd never seen this paint program. I'll never be able to use Deluxe Paint or even Brilliance with-

out wishing I had TV Paint 2 and a graphics card instead. The ability to run and create true colour 24-bit images of incredible detail and clarity puts the Amiga on a par with dedicated Workstations. With a broadcast quality board like the Harlequin and TV Paint 2's alpha channel support, professional video work on the Amiga is now a reality.

TV Paint 2 is not really anything new. But it is fast, expressive and easy to use. It's the best. I love it – I want to marry it. **CU**

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Excellent. Fast, wonderful pictures.	
FLEXIBILITY	★★★★★★★★★★★★87%
Not brimming with features, although ARXSP support is welcome. How can it work with some many boards and touch-tablets?	
INNOVATION	★★★★★★★★★★★★80%
Nothing very new here – most features appeared in Deluxe Paint a long time ago.	

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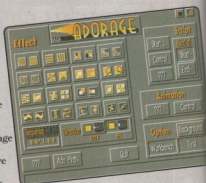
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SUPER SMOOTH ANIMATION

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There are several distinguishing criteria that differentiate between IFF animation and SSA animation. IFF animations are generated and played back as complete single images by means of so-called page flipping. The advantage of IFF animations is to be found in their compatibility. This means that, for example, IFF animations which have been generated in Adorage can be imported and played back in DPaint and then, for example, in Scala. This format presents serious disadvantages in all other respects, however. The quality of the animation leaves a lot to be desired when large quantities of data are involved. Apart from this, they require a lot of memory space.

The SSA animation format is new. Frames are calculated and played back in this format. SSA = Super Smooth Animation: super smooth playback quality is the most outstanding advantage of this format. Furthermore, data is compressed to a much greater extent, which is indicated by the modest memory requirement. These advantages ensure a considerably higher degree of flexibility in the realisation of animations.

Adorage is a multi-effect system, i.e. it includes an infinite number of options for the generation of video effects, as used in television. The main feature of Adorage is the generation of high-grade fade-ins, cross-fades and dissolves between computer graphics or images and, as if by magic, between computer graphics and a running video signal, which presupposes the use of a Genlock.

This means, for example, that a graphic image or text can scroll on a running video image and rotate about several axes before exploding out of the screen, whereupon the second scene commences, in which a logo is brought in undulating only to disappear again in a spiral nebula - just one example of the unbelievably wide range of options offered by Adorage. **Order Code SW0101**

System Requirements: Kickstart 1.2 and above with at least 1MB of memory

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Most Amiga musician's sonic arsenal will include their favourite score editor and some sampling hardware and/or software. This is because sampling is generally seen as the only way to get quality audio into and out of the Amiga. However, sampling relies on ready-made sounds being easily available, but unless you have a roomful of musical instruments at your disposal you have to rely on sounds from records or CDs. So what do you do if your favourite sound is well mixed back into an accompaniment by the Vienna Boys' Choir? Wouldn't it be nice if you could synthesise such amazing sounds directly onto your Amiga? Yes, well do you want an inexpensive program which could give you better sounds than even the best samplers? Yes. Read on then!

In 1990, the delightfully named American software house, The Other Guys, launched a program which few on this side of the pond knew about, but which could be the answer to many Amiga musician's prayers. The program is called **E-Z FM** (pronounced ee zee - easy, ged?) and it's a ridiculously powerful FM (FM stands for Frequency Modulation (if you must know)) synthesis program which transforms your Amiga into a top-class synthesiser.

E-Z FM allows you to create your own instruments to use with your favourite Amiga music samples. The sounds are saved as one or three octave IFF-BSVX sound samples, which can then be loaded into Sonix, OctaMED, Deluxe Music or any music program which accepts IFF samples.

SMOOTH OPERATOR

The program is intuitive to use. The main screen contains most of the sliders and gadgets you need for setting up your sounds. This "single screen" concept gives the program a deceptively uncluttered feel which belies its power! You are given control over six Operators (FM-speak for oscillators) and you can change the frequency (pitch) and output level (volume) of each one independently with the sliders. Each operator lets you select one of six possible waveforms as your raw material (many "professional" FM synths only give you a simple sine wave). This surprisingly simple set of controls gives you an almost unlimited degree of tonal flexibility, depending on how

You can make sounds for Sonix, or any other program which uses IFF samples.



Making music on the Amiga can be a lot of fun, but finding a decent sound source can be frustrating. Rob Baxter looks at an under-rated program to show us what we've been missing.

the operators are combined with each other.

ALGORITHM 'N' BLUES

In FM speak, a combination of interconnected operators is called an "algorithm", and these operators may be either sound sources (carriers) or sound modifiers (modulators). For example, you can have three modulators all controlling one carrier, or have a "stack" of several modulators, with each one controlling the next in sequence with the lowest one driving a carrier. **E-Z FM** offers you a choice of 32 preset algorithms which is enough to cover just about any practical combination.

The difference in pitch between a carrier and its modulator, or between two modulators in a stack is where the rich variety of tones available with FM come in. Some of the sound combinations can produce sound which are so complex they sound anything like music. However, with a bit of thought and some fiddling with all of the facilities available the only limit to the sound is your imagination.

OPEN THE ENVELOPE

Each operator has its own "envelope shaper". A sound's envelope is an "x,y graph of loudness it has as it progresses from silence to its loudest point, then fading back to silence again. You have full control over the envelope of each operator, so you can create highly realistic instrument simulations.

Setting each envelope is simply itself, just click on the envelope



E-Z FM's main screen showing the sliders which control pitch and output level for each operator.

HOW TO MAKE MUSIC ON YOUR AMIGA

If this article has whetted your appetite but you would still like to hear what it's all about before buying **E-Z FM** there are a number of PD music disks which I have produced that use **E-Z FM** extensively. Some CU AMIGA readers may already be familiar with my "Desktop Music Workshop" disks of classical music which have been around for some time! Of late, I have been using **E-Z FM** almost exclusively to make my instruments, so the disks I would recommend are: **Concerto: A three disk set of Bach's Six Brandenburg Concerti**, the vast majority of sounds were made with **E-Z FM**.

The Desktop Harpsichord Recital: The title says it all really, but all the harpsichord sounds were made with **E-Z FM**. **Classic Gold No. 1: Bach's Toccata and Fugue in D Minor**. Again, all the instruments were made with **E-Z FM**. This last disk needs 1MB of Chip RAM. All these disks can be obtained from United Public Domain Distributors. Contact Blitterswijk, Cliffe House, Primrose Street, Knapley, Yorks. YO21 4NB.

gadget (one for each operator) and a window opens in which you use the mouse to draw the "slopes" of the envelope curve into the desired shape. Click on "update" when you're satisfied and the deed is done. **E-Z P-Z!**

FM synthesis, however, is a complex subject - as one gets deeper into the program you begin to find out which pitch relationships produces which type of sound. At first, you might have a particular sound in mind but no amount of fiddling and tweaking with the various controls will come up with quite what you want. There's often no substitute for trial and error but it quickly begins to make sense.

The odd head-scratching session aside, **E-Z FM** is a breeze to use and the sounds are truly magical, they all possess that "crystalline" digital purity that we've come to expect from FM synthesis. The program will produce astonishingly rich and interesting sounds with a clarity that can be difficult to obtain from a sampler.

DOIN' THE DO

When all your settings are complete, click the DO button and the computer does its work. **E-Z FM** is quick; a full 64K sound only takes about 35 seconds to generate (much quicker on an accelerated machine) shorter sounds a lot less, and while the sound is being generated you can actually see its waveform "grow" in a window at the bottom right of the screen. Full marks for that, it's far better than staring at a "busy" sign and wondering when it's read.

JARGON BUSTERS

OSCILLATOR: This is either an electronic circuit designed to produce a repeating waveform of various frequencies - or in the case of **E-Z FM**, a part of a computer program which reproduces that function.

OPERATOR: Another name for an oscillator is FM Jargon.

WAVEFORM: The electronic (or digital) representation of a sound.

SINE WAVE: The simplest waveform. It sounds very pure, a bit like a flute.

IFF-BSVX: The most widely used Amiga sound format.



This ray traced image looks blurry - but look at the glass and reflections: perfect. Pity about the cup, it looks as though I designed it myself (I didn't).



Er, yes, our delicious Production Ed Lind may think designers are weird phobic symbols, but then would give anyone nightmares.

Designer Objects Volume 1

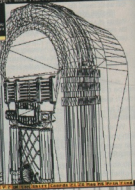
If you love 3D but find designing objects a chore, why not follow John Kennedy into a virtual cafe for a chat?

Creating objects for use in 3D-rendering programs isn't easy - most of my attempts at creating spaceships and helicopters with Imagine end up looking like strange spiky balls. If I can't find the objects I want in a CD library somewhere, I usually give up and use Real 3D instead, as I find it a lot easier to work with.

That isn't to say that Imagine doesn't have a lot going for it. It's very good at rendering complicated objects, and it's also very good at making animations. Even better, Imagine is also about to be given a

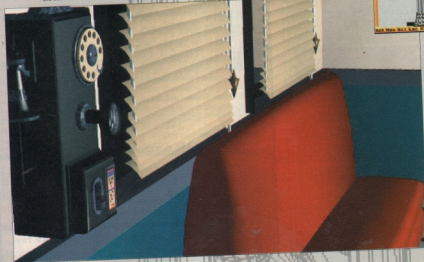
serious revamp, so it's about time I sat down and learnt to use it properly. However, just as I'm about to do so, along comes a pack of pre-defined objects for Imagine - Designer Objects volume 1. This is a three-disk set containing all the parts you need to re-create a 1950's American Diner, complete with counter, stools, jukebox, payphone, plates, glasses,

PROJECT: Diner
FORMAT: CD-ROM
PRICE: £19.95
PUBLISHED BY: AMIGA
DEVELOPED BY: J. KENNEDY



It's only when you see the wireframe representations in the editor that you can begin to really appreciate the work involved in creating the objects.

When you need to telephone home, try over in the corner. I love the blinds too.



menus - heck, there is even a toilet in the corner. Everything you see in the accompanying pictures came from the set and there are still plenty more bits and pieces left to use.

The objects are designed so that loading them into the Imagine stage editor will automatically position them correctly for the scene, which means you only have to make a few quick adjustments to camera angles and lights before you can start rendering. Rendering is remarkably quick for objects which appear very detailed, and using them to make an animation is a real possibility. On an A4000/330 with a FPU (Floating Point Unit), I found I was creating 24-bit hires scanline images in about 11



The jukebox is the highlight of the set. It's an authentic Wurlitzer 1015 and it looks fabulous.

minutes. Ray tracing, however, reveals the true quality of the objects, but takes much longer. Come on Software Demon get that 50MHz 68030 upgrade out before I die of old age!

Memory is the only problem, because you are going to need lots. Although supplied in both low and high resolution forms, a scene featuring all the objects can take from 5Mb to 14Mb of RAM to render. You'll be able to get by on an A1200 with some extra RAM if you try not to get carried away. These scenes were created on a 14Mb A4000, but most left about 9Mb to spare.

DETAIL

The objects themselves are excellent, perfectly proportioned and make great use of existing Imagine textures. Although there is a limit to what you can do with the inside of an 1950's Diner, the objects will find homes in many other scenes. The techniques used to build them will keep Imagineers busy for hours as they try to recreate them. Highly recommended. **CU**

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EASE OF USE ♦♦♦♦♦♦♦♦♦♦85%
Simply load into Imagine and render. Good instructions help the beginner.

VALUE FOR MONEY ♦♦♦♦♦♦♦♦♦♦90%
Exchange rate and import duty permitting, these objects are a bargain.

EFFECTIVENESS ♦♦♦♦♦♦♦♦♦♦92%
Scenes rendered in 24-bit colour look staggering, there is no other way to describe it.

FLEXIBILITY ♦♦♦♦♦♦♦♦♦♦75%
Okay, so when you want to leave the diner you have problems, but some objects will still be very useful in other work.

INNOVATION ♦♦♦♦♦♦♦♦♦♦80%
Three Dimensional Clipart is great! Look out for more in the series.

Imagine owners everywhere will appreciate the work that has gone into this set and demand more of the same.

OVERALL 85%

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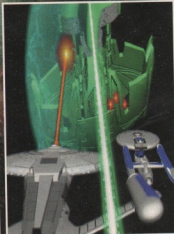
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Disk Magazine



Mixed in with a healthy splattering of articles are high quality Star Trek-related images such as this.

Calling all trilets – or 'trekkers' as they like to be referred to these days, (so I have been reliably informed). *The Final Frontier* is a five disk extravaganza, absolutely packed with everything you ever wanted to know about *Star Trek* but were just far too interesting to care. If you've ever lost sleep because you just had to know what Jean Luc Picard's toilet decor was like, or the colour of his curtains – then this is the magazine for you.

Every aspect of *Star Trek* (all 'generations' and movies) and even *Deep Space Nine* is covered in this regular series of disk magazines – including modelling tips, book and video reviews, licit/unlicit *Star Trek* merchandise details, *Star Trek* art galleries and even convention reports. Phew! I like *Star Trek* as much as the next man but these guys are real fanatics. It appears that their 'final frontier' doesn't extend further than their own front door – and beyond that is something that still seems something of an 'undiscovered country' to them – which we non-Trekkies commonly refer to it as 'reality' actually.

Credit where credit is due however, this mag is professionally put together with well-written articles, great pictures and some popastic music from amongst others, Allister Brimble (Team 17's musical genius). If Enterprise exploits are your thing then you will not be disappointed.

Available from:
Seventeen Bit Software,
1st Floor Offices, 2/8
Marketstreet, Wakefield,
West Yorkshire, WF1
1DH. Tel: 01924 669982.

78%

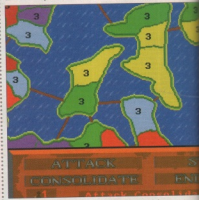
The *Final Frontier* disk magazine boldly goes where no disk magazine has gone before.

ARCHIPELAGOS CAMPAIGN

Game

World domination is the name of the game (again) in this simple but surprisingly addictive strategy offering in which up to six players (human or otherwise) slog it out in an attempt to wipe out opposing armies and conquer lands anew.

The gameplay is certainly simple enough however, so even those that don't normally enjoy strategy games should find this easy enough to get into. A map of an imaginary world is laid before you and you're then allotted your own share of the islands that make up that world. Each of these regions has a number in it which defines the strength of each individual army on that island. And each island is displayed in the colours of the armed camp that controls it. In order to gain



Who needs peaceful co-existence when it's so much fun conquering lands in Essex Computer Systems' brilliant Archipelagos Campaign?

supremacy you must soldier forward and attack neighbouring lands, matching your forces against theirs. If your attempt proves successful you're then the proud owner of another chunk of territory. When the cries of battle have subsided, you can then proceed to move your remaining troops around your empire to strengthen those areas of the map that are most under threat from enemy invasion. Gaining land can also strengthen your armies as the more countries you occupy, the more new recruits you are rewarded at the end of your turn. Once you start to lose land, however, it's a bit of a slippery slope trying to get back on top of the game.

Archipelagos Campaign may not be the most original game by any stretch of the imagination, but it's an enjoyable romp nonetheless.

Available from: Essex Computer Systems,
118 Middle Cockerford, Basildon,
Essex SS16 4JA.

90%

9 FINGERS

Demo

Remember Spaceballs' brilliant *State of the Art* demo? Well this is their follow-up, and it's even better than the original!

It's a two-disk set, but fortunately you only need one drive to run it. What you get is a stream of stylised video animations, consisting mostly of various dancers going loopy to a decent techno backing track. The coders have done a sterling job in vastly improving the graphics over the originals, proving that they're still the best demo crew on the scene by a long shot. Oh, the soundtrack's got a lot more beef in it too. A bit special and no mistake.

Available from: Graphic FX, PO Box 69, Manchester M21 2BN.
Disk Nos. MU184A, MU184B.

91%



ERIKA AGA

Slideshow (A1200 only)

Hands up those of you that actually follow the exploits of that masterpiece of American television, *Baywatch*. Right, hands up who pencils a regular date into their FloFax just to sit down in front of the box to ogle at that goddess of the Californian sands, Erika Eleniak. Just as I thought! Well, I've got some good news for you - she of the skimpy swimsuit has made her way to the Amiga thanks to a flatbed scanner and a copy of ADPro.

This single disk slide show contains some glorious AGA pictures of the blonde beauty herself in the sort of poses that would certainly give David Hasselhoff something to think about.

Due to the sheer size of each picture, there are only four images to look at. But quantity seems to have taken a welcome back seat to quality. For all Erika Eleniak fans over the age of 19 (two of the pictures are definitely adult material), *Erika AGA* will give you a new insight into the lady behind the swimsuit.

Available from: 17 Bit Software, 1st Floor Offices, 2/8 Market Street, Wakefield, West Yorkshire WF1 1DH. Tel: 0924 366982. Disk No. 2896.

65%

GRAPEVINE #18

Disk magazine

Are you ready for another encounter with the guys from LSD? You'd better be because here is issue 18 of *GrapeVine*, the demo coder's and hacker's disk magazine. Packed full with over 321 articles containing gossip and headline tips on how LSD think you should live your life - and believe me, these guys don't mince their words. Subjects such as the 10 worst chat up lines and 10 things you can do with a dud floppy disk are both covered in this three disk set.

To be perfectly honest, a great deal of the humour is definitely from the "Chubby Brown" school of comedy and so those who are easily offended should steer well clear. For the rest of us, however, *GrapeVine* issue 18, guaranteed to raise a smile or two.

Available from: Mega PD Computer Software, 78 Bockingham Green, Basildon, Essex SS13 1PF. Tel. 0268 559164. Disk Nos. 0076A, 0076B, 0076C.

77%

CHANNEL Z ART AND ANIM SPECIAL

Disk magazine/demos (A1200 only)

This is *Channel Z's* first offering for the new year and it contains a healthy selection of pictures, animations, utilities and features for A1200 and A4000 users. Definitely worth a mention is an excellent Eric Schwartz animation and there is also a special feature all about Eric, which lists all his works and the pieces of software that he used to actually create them.

Also worth a mention is an impressive animation of a very tasteful (but unfortunately more) Marilyn Monroe head, which smoothly rotates back and forth. Backing up these visual treats are some useful graphical tips and utilities, soothing music and a good selection of interesting articles.

The only real problem with the *Channel Z* magazine is the almost total lack of A1200-specific material - surely an A1200 disk magazine should include A1200 information?

Available from: CZWN, 3 Edleston Road, Blackpool, Lancashire FY1 3HN.
Disk Nos. *Channel Z* issue 3.

43%



What is the world's worst chat up line? Find out for yourself within the pages of *KnighT Fight*.

KNIGHT FIGHT

Game (A1200 only)

In days of old,
When knights were bold,
And computers were not invented,
Warriors in white,
Came to fight,
And walked away contented. (Ahem.)

Oh well, poetry was never my strong point, but beating the living daylight out of pixelated warriors is something that does appeal to me. In this AMOS game you can choose to be one of four ancient warriors - either a knight, a wizard, an elf or a dwarf - each of which, in true *StreetFighter* style, has his own special moves.

But *KnighT Fight* does offer a few pleasant surprises which save it from being lost amongst the plethora of fighting games that seem to be filling the PD libraries these days. Most interesting of all, you can place bets on the fight which can result in funds for the purchase of "power-ups" if you win.

Unfortunately *KnighT Fight* does not manage to succeed in the playability stakes. The controls are just too basic. Grips aside though, *KnighT Fight* may be worth investigating.

Available from: Essex Computer Systems, 118 Middle Crockford, Basildon, Essex SS16 4JA.

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StreetFighter is hard to be, but *KnighT Fight* is. Strategy doesn't save you in *KnighT Fight*.

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Do you know the difference between a "Running Martingale" and a "Standing Martingale"? Do you even know what they are? If not, then Your First Pony should be at the top of your PD shopping list.

Put together entirely using Gold Disk's HyperBook, Your First Pony is an interactive information system that contains everything you need to know to help keep your horse or pony happy. Subjects covered include horse and pony health, tack, grooming and clipping, shoes and a very detailed breakdown of horse face and leg markings. All this information is displayed in a highly graphical format complete with a healthy selection of digitised pictures. In all, a must for all horse mad Amiga owners.

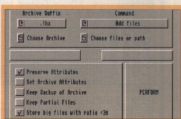
Available from: NBS PD, 1 Chain Lane, Newport, I.W. PO30 5QA. Tel: 0983 529 594. Disk No. CLE34 (2 disks). **88%**

USEFUL UTILITIES 3 Utilities

Useful Utilities 3 is a disk containing some of the most useful public domain utilities available. Although the disk contains only six different programs, all are of very high quality indeed, both in terms of their features and presentation. Of particular interest is FHSpread, a relatively unknown spreadsheet program that is definitely a cut above the rest. Although not quite in the same league as most commercial spreadsheets, FHSpread is packed to the gills with spreadsheet functions – making it ideal for the businessman on a (very) tight budget.

Also on the disk is LogicShop, an interesting circuit design program and S-Pic, a small utility that converts IFF images into executable files that can be viewed without the need for a separate picture viewer. Your Workbench is also in for a treat too with DiskSalv 2 (a brilliant disk recovery program), DiskMate (one of the best PD disk copiers) and Artfil (definitely the best PD system monitor available). All in all, a very good line up that every Amiga owner should find useful.

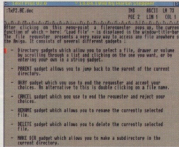
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USEFUL UTILITIES 4 Utilities

Haven Computing do it again in this latest offering containing even more useful public domain utilities. Once again, the quality is very high indeed with the programs covering such diverse subjects as animation, data compression and even money management. Comms fanatics should find all it very useful as it provides a quick and easy method of adding an intuition-style interface to any of the many Shell-based archiving utilities. The program fully supports LHA, Arc and Zoo formats with all the options that they provide. Main Actor is interesting too – it's a fully fledged animation editor that supports a number of well known animation formats. With it you can load and save animations, edit frames within an animation and even alter the timing of frames. In all, another great PD disk.

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Available from: NBS PD, 1 Chain Lane, Newport, I.W. PO30 5QA. Tel: 0983 529 594. Disk No. CLE32 (2 disks). **88%**

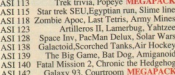
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ASI 94 Super skoda challenge, Giddy
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ASI 96 **Dungeon Flipper, Backgammon**
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ASI 109 Psycho blast, Hamburger, Thrallbound

PG 326	DART'S GAME	A nice darts game
PG 327	NOSTROMO CHEATS	Tons of cheats on this one



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video		PU 993	ASI FX DISK 2Make	all games work on 2
for video titling		PU 995	MENU MASTER 3	Floppy menu crea
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PU 064	HARDDRIVE UTILS
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BLITTERCHIPS
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ART GALLERY

Think you can better this month's selection of readers' art? Then send any contributions to the usual address. For now, feast your eyes on this collection.

MAGIC CARPET

By Steven Browne.



Alan Reed
or The
Master from
Essex.

HEAT WAVE

Warren Marsh of Manchester created this warrior using the program Deluxe Paint 4 AGA.



1 First he did half of the picture in outline, using lighter colours for the muscle and darker colours for the arms around the muscle.

2 The background was created next using a spraycan inside the halo making a sun-like image.



3 Next, the warrior's followers were drawn in.



4 Finally the warriors are shown brandishing all their weapons in the air.

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Tipster is available in two versions, costing £34.95 each. The International version is for use with daily newspapers while the Professional is for use with The Racing Post. Please phone for a demo disk (£9.95 refundable against purchase) which also contains The Punter (Pools), The Dogs (Greyhounds) and The Bookie (Odds Calculator).



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CU AMIGA SPECIAL

Welcome to our new look readers' offers. This month sees the launch of our new upgrades for the Amiga A1200.

Unlike some A1200 upgrades, ours are fully PCMCIA compatible. Designed and built in the UK exclusively for CU Amiga - never has it been so affordable to upgrade an A1200 with more memory on a board also capable of adding a 68882 floating point maths co-processor at speeds of up to 50MHz.

How can we be so cheap? Well, thanks to the huge success of our campaign to upgrade all Amigas to a minimum of 1Mb, we have exceptional buying power. Also, because so many of our readers buy upgrades we can use the very latest manufacturing technology to produce our upgrades - and hence give you exceptional value.

So why upgrade your memory? Probably because a memory upgrade is the most versatile enhancement you can make to your Amiga. Apart from the fact that you need it to run the more powerful Amiga software there are many extra benefits too. You can use some of it as a RAM disk, just like a super-fast extra floppy drive. This means you can avoid the cost of a second floppy drive or hard disk. Some software that claims to need a hard disk will run on your Amiga from a RAM disk. A print spooler can save you time waiting for your printer to finish printing before you get on with your work, use your new RAM instead of upgrading your printer or buying an expensive buffer.

For reasons best known to themselves, Commodore 'forgot' a real-time clock for the A1200. Well, we've put it back with our new UK made A1200 clock for just £12.99. Getting more from your Amiga means at least 1Mb, getting the best means adding as much RAM as you can is the essential Amiga upgrade!

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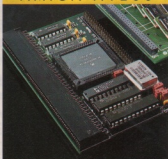
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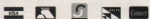
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AMIGA Workshop

ISSUE 15 MARCH

As anyone who has ever used an Amiga will tell you, you can use it for a lot more than just playing the odd game. Amiga Workshop is here to show you exactly how your Amiga can be utilised to do everything from create games and works of art through to linking up with the outside world. Through the next 32 pages, you'll be taken through tutorials in **ARexx**, **Shoot 'Em Up Construction Kit** and **Blitz Basic**, along with our usual **Question And Answers** session and your opinions aired in **Backchat**. What are you waiting for? Turn the page!

172 CALIGARI COMPETITION

It's time of the fastest 3D rendering pack again to use, and it could be yours without agents going into shops and peering one up. All you need is a decent knowledge of CU AMIGA and Caligari 24 and a copy could be yours!

Yet another hot-bed of opinions, views and violent disagreements. Backchat is the place to be these days if you're a youth with a conscience and you want to change the world. Alternatively, you could just tell us if you think PCs are better than Amigast

Is the future of the CD32 so bright it has to wear shades, or is it looking for an early retirement and a favourite armchair? Mat Brothfield voices his opinion.

PETER LEE'S PAINT MASTER CLASS



If last month's AGA tutorial got you off to a flying start, this month's four-page extravaganza will have you foaming at the mouth! Single colour cycling, metallic glints and all manner of practical tips await you!

SHOOT 'EM UP CONSTRUCTION KIT



John Kennedy takes you for a walk through the past with this month's coversdisk tutorial. You've all learned how to do scrolling shoot 'em ups, but what about something a little more tricky - Asteroids, for example!

BLITZ BASIC



What's the difference between a Blitz Shape and an AMOS Sprite? Find out this month as Jason Holborn delves a little deeper into the world of Blitz, and resurfaces in time to show you that hardware sprites needn't be as hard as their name suggests.

Regulars

166 QUESTIONS AND ANSWERS

You'd be surprised just how many ways there are to get stuck in the Amiga world. Honestly, it's worse than playing Twister in the dark when your back's gone! Thank goodness, Mat and John are on hand to help out.

174 BACKCHAT

Yet another hot-bed of opinions, views and violent disagreements. Backchat is the place to be these days if you're a youth with a conscience and you want to change the world. Alternatively, you could just tell us if you think PCs are better than Amigast

178 POINTS OF VIEW

Is the future of the CD32 so bright it has to wear shades, or is it looking for an early retirement and a favourite armchair? Mat Brothfield voices his opinion.

VIDEO VISUALS



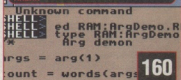
Video titling needn't be the domain of the expensive titling packages. Jason Holborn shows you how, with nothing more than a copy of Deluxe Paint IV, you too can create a vast array of highly professional and impressive video effects.

COMMS



We all know what FidoNet is, now all you need to learn is how to get started with it. John Armitage explains the ins and outs of setting up a mailbox (without the need of a postman and a letterbox) in his own, inimitable way.

ARXX



Oh, what do you think you're looking at? You starting something, or what? Okay, so that might not be what Dave Simmon means when he says he'll show you how to have an argument with ARexx - at least we don't think so. But read on to find out.

OTP



What's that? You want to try your hand at desktop publishing, or what? Don't feel you have the equipment to do the job? Jason Holborn is at hand to show you just how you can create your own publishing empire using the smallest amount of equipment. Maybe you'll be the next Rupert Murdoch?

Pete Lee's

DPaint AGA TUTORIAL

PART

2

The beauty of DPaint AGA has a lot to do with its use of colours. Taking full advantage of the A1200's beefed-up graphics and display modes, it makes the 32-colour set-up of the standard, non-AGA type program look really sad.

It's not just the range of 256 colours in low-resolution mode which is exciting, but the sheer joy of not having to scribble, save and hoard each colour jealously, in fact, you can actually waste colours in AGA mode and it won't matter.

Last month, we looked at ranges which had a default palette of over 250 colours. This month, we check out colour cycling, which also has a default palette of over 250 colours. So, you have to do very little to create multi-coloured, wide-ranging single-frame animations.

Just browsing through the colour palette will show the wide assortment of ranges built into the program – there are so many colours to choose from including golds, blues, greens, reds, yellows, oranges, pinks and so on. In fact probably almost every colour under the sun is here to choose from.

We'll be using those to their best advantage. But it won't be that easy. There are a couple of things to learn before you can rush in and start tackling the hands-on tutorials, and the first is:

SINGLE COLOUR CYCLING

No, it's not a mistake. DPaint IV AGA can cycle one colour to another without affecting anything else in the palette. And using this feature allows you to pulse colours to give a stroboscopic effect, or make objects disappear if you change them to the background colour. Here's how to do it: the ranges requester should be familiar after last month's tutorial, but you may have missed something as you added colour beads from the palette to the placement bar above. Each colour you position there has a dot underneath it – this shows that it is a colour from the current palette.

To get a single colour to cycle, we have to use some other colours not in the palette. To do this, just put two different colours at opposite ends of the placement line, and click on 'show'. The intermediate colours will be displayed in the display window. This is the Amiga's palette you're seeing, not yours.

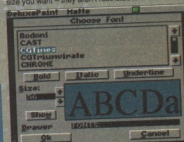
To select one of the shown colours, press the comma key on the keyboard, and your cursor will change into the pipette sampler. Click near the end of the second colour on the shown display to choose that colour. Now move your cursor (which has changed into a colour bead) anywhere you like on the placement line. The colour will be positioned, but won't have a dot underneath it. The shown range will incorporate this colour, though. You can remove the second of the original colours now (click on it and drag it off the placement line and let go of the mouse button), and the range which is displayed in

Owners of Amiga 1200s are in for another treat this month – swarming ants, flaming comets and blazing effects – as Peter Lee shows you how to squeeze the most from DPaint's enhanced AGA version.

the show window is the range of colours which will cycle when your first colour is used on screen. So you can see, it's using one palette colour, and an "imaginary" one which isn't available to draw with. Set the rate slider to suit your needs; a low rate gives a very slow transition, while a higher rate strobes the colour. You can use this technique several times so that, for instance, a dark colour suddenly flashes from blue to yellow before disappearing into darkness again. Do this by placing non-dot colours in the appropriate location along the placement bar as before. Remember though, that this single-colour Range takes up one of only eight available ranges at your disposal.

TEXT

As an A1200 user, you have automatic access to new Amiga font technology. In the past, fonts were stored as bitmaps in standard sizes. But now with a new Workbench setup you can use outline fonts. These have the advantage of being displayed in any size you want – they aren't restricted to the normal



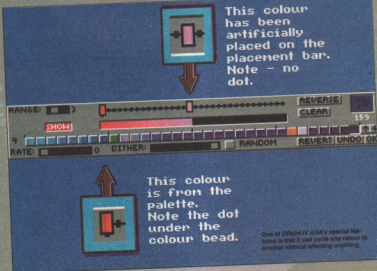
Now, with a new Workbench setup, you can use outline fonts such as CG Triumvirate, CG Times and LetterGothic.

8, 24, or 36pt definitions which you find on almost all bitmap type styles. However, the downside is that this kind of flexibility leads to larger amounts of storage and memory usage.

There are three standard Amiga outline fonts: CG Triumvirate, CG Times and LetterGothic (the CG prefix stands for Compugraphic, the company which developed this system). The way to control their size is simply to highlight one of the typefaces in DPaint's Text window, click in the size box, and type in the new figure. You decide how big the font will be, which is a major change from the restrictions of bitmap fonts.

ACTIVE INGREDIENTS

Before you move onto the main tutorial, you may want to refresh yourself with this example on the main points of colour cycling – illustrated in figures



One of DPaint IV AGA's special features is that it can cycle one colour to another without affecting anything.



ANT
antics...

Figure 1: Initially you have to alter the palette to achieve the movement effect.



1 and 2 overlap. We're going to paint a swarm of ants on screen, which continuously moves along a given path. Firstly, you'll notice I've made the background purple. You can use any colour you like, but it'll be important later that you make a note of exactly which colour it is. To do this, check its colour number in the Palette requester.

The heart of the animation is a range of colours which are all turned to the background colour – except one. So as this one colour cycles along the line of blacks, you get an impression of movement. To achieve this effect, we have to alter the palette. Call up the palette requester (p, or right click in the current colour selection window). I've used a sequence of 11 adjacent colours, turning 10 into the purple of the background, leaving the last one blank for the ant colour.

To copy a colour (in this case our purple, number 170) click on it in the palette requester and click on the copy button, and place the cursor in the slot into which you want to duplicate the colour. If your colour is in a different palette number from the destination, don't worry – just click on the up/down arrows of the requester to move to the correct location. Do the same on the other 10 colours, and copy colour 0 (black) into the first position. Click on OK. (If your chosen colour is a few palettes away, remember that once you've copied it into a new slot, you can use that slot as the basis for the rest of the copies, without having to go off to other palette numbers to duplicate it).

Call up the Ranges requester from the colour pull-down menu (keyboard shortcut Ctrl+V). One by one, position the 11 adjacent colours (10 purple, one black) next to each other on the placement line, starting from the left as in the illustration.

Set the Rate to the highest level, to give the little critters lots of rapid movement when animate, and click on OK. You can see from the screenshots that I added some text, but this is immaterial to the project; you can simply draw the ants on a blank screen, cleared to the original colour you used as the background, and which is copied into the 10 colour slots in the palette. It's important to use the original colour as your background, and not one of the copied colours within the range. If you don't, the whole image will

strobe and do you an injury! Select the little cross brush (the next to smallest one), and Freehand drawing mode. Now press key F7 to turn on cycle draw and ensure your foreground colour is one of the 11 we've just defined. As you draw your trail, you'll only see the black dot as it's painted, but don't worry readers – the 10 background colours are also painting.

You can draw with screen cycling turned on to give you a better idea of what's happening (Tab

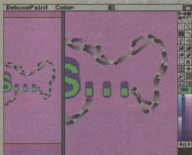


Figure 2: Eventually you end up with an animated string of insects.

key). Draw out the lines of ants, and go over them again to make the swarm more plentiful.

You should have a nicely animated string of little insects once cycling is activated. I've included another screenshot to show the actual colours we used before converting them. You can easily see that as you cycle paint, all the colours in the range are used one after the other. The fact that 90% are 'invisible' until cycled is all part of the DPaint AGA magic. **CU**

NEXT MONTH

We'll be moving onto animation using all those lovely AGA colours, and having more fun with morphing. Until then, keep those pixels cycling.

BOLD 'N' BRASSY THE GLINT FACTORS

Shimmering metallic effects (or water-based ripples for that matter) are just a combination of ranges, fills and cycling. Here's a quick guide to making this brassy text example; specific details of accessing DPaint's features are given in the other tutorials.

big'n
bold



1 Select one of the calligraphic fonts, and give it a beefy 100pt size.

2 Call up the range requester and set a range of golds and yellows.

3 Call up the fill requester, and with the gold range active, select Line Fill.

big'n
bold



4 Select the fill tool, and fill each letter individually, placing the direction crosshair in roughly the same position each time.

5 When you activate Cycle now, the letters will shimmer very nicely.

6 I added a background for extra interest; Extra lettering was created in the spare screen, and placed 'behind' the golden letters by creating a stencil (last month's tutorial).

big'n
bold



7 Similarly the streaks of light and

big'n
bold



dark were created with the stencil on with Transparency set to 40% and the Polygon tool used with a darkish grey colour.

big'n
bold



dark were created with the stencil on with Transparency set to 40% and the Polygon tool used with a darkish grey colour.

big'n
bold



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bold



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HANDS-ON TUTORIAL

TUTORIAL TWO

Red and yellow and pink and green, orange and purple and blue – just a few of the brilliant range of colours that you can achieve when you use DPaint AGA. In the second part of his tutorial Peter Lee boldly goes where no artist has gone before.



DPaint AGA users can count themselves lucky to have such a vast palette to work with. Once again for this tutorial we're using 256 colour low-res mode; it's not that we're going to be using so much colour in our work, it's just easier to set up things like Ranges. For this walk-through demonstration we're going to check out the differences colour cycling can make to your work. And on the way we'll be brushing up on some tips on getting the most out of DPaint.

STEP 1

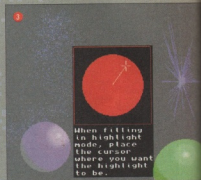
As usual we're going to start with DPaint's default palette, in 256-colour low-res mode. The first thing we need to do is create a range of blues for the starfield and comet head. Call up the range requester and, as in our illustration, place the colours numbered from 140 to 155 in alternate slots on the placement bar. There's not a great difference in colours, but enough for the kind of twinkling effect we're after. Set the rate counter to 60, which is quite a fast cycle, and click on OK.

STEP 2

Create the starfield like this: Select the airbrush drawing tool, one of the blues in our newly-created range, and the single pixel brush. Press key F7 to turn on cycle draw, and paint the stars on screen in clouds. If you like, turn on colour cycling as you draw (press the Tab key) to get an idea of what the image is going to look like. You can make the stars as dense or thin as you like. Now we want to draw the comet's head using a cute DPaint trick. Select the line tool now, and with a finger on the ctrl key, draw out a pattern of radial lines, which will centre on your starting point. As long as you hold down the ctrl key, you can radiate lines like this. If you have cycling turned on, you will see how great the strobes of coloured lights look as they pulse down the lines.

STEP 3

You need another range defined now, for the purple planet. Again, call up the range requester, and be sure to move the range number slider along one, to position Two, otherwise you'll over-write definition One, which is for the stars. Now place the colours numbered 162-174 next to each other in the placement bar. You can click on Show if you like, to see how the colours merge together. Click on OK. Open up the Fill requester, and click

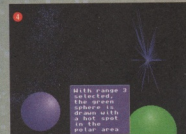


on HI, for a highlight fill. Make sure range Two is the active fill range.

From the illustration you can see how the position of the Fill highlight crosshair determines where DPaint will place the first colour in the range. For the purple planet, you can place it top right, but for the green planet you might try to create a polar cap by placing the highlight just below the top centre of the circle.

STEP 4

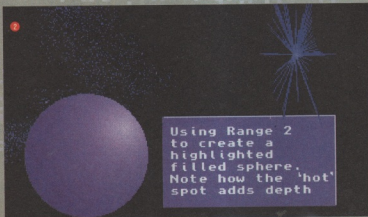
The green planet needs to have another range defined for it, so call up the requester, and move the range number on to Three. The colours to use



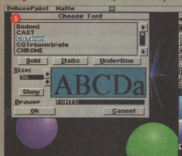
across the placement bar are 90 to 109 with a zero rate selected. Click on OK, and open up the fill requester, changing the range number to Three. Now draw the planet as before, with its highlight in the polar region. The planets and stars are now in place, and so are their graphic "hot" spots.

STEP 5

Time to add some text now. Call up the fonts requester (right click in the Text tool) and select



CGTimes. This is a special compagraphic font which can be made any size you want. Unlike the Amiga's fixed fonts, which need a defined size, some of the A1200s typefaces are computed from data, and can be re-sized at will. You'll notice I've set this font's size to 56, which is beefy enough for our needs. You may want to add your



own text, so the size you type in will be based on how many words you want. We need to be careful, now, in selecting a colour for the text. If we pick one which has already been used in the image we could hit a snag, because they've all been included in a Range. Some ranges will cycle, and others won't (the ones with 0 as their rate). In a cunning move we're going to make the text pulse, from invisible black to its current blue colour – and only use one colour to do it! It amazes me too, but it works. Here's how...

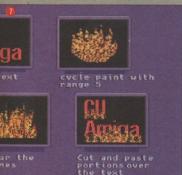
STEP 6

You might just make out that of the four colours in the placement bar, only one has a dot underneath it. This is the only true palette colour; the others have been picked up and placed there by another means. So what will happen when cycling is turned on is that the text colour (the one with the dot under it) will strobe from black, to blue, then flash white before fading again to black. And as I said, this uses just one palette colour. Check out the main article for a more detailed summary of how to use this feature.



STEP 7

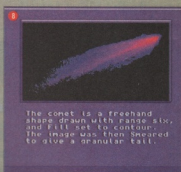
Now for hot spots of a different kind. As part of the main image, combining as it does lots of uses for colour cycling, we've built a cosy fire to use



with a little bit of text. And, yep, you've guessed it – we need a range! This time it's a little different in that you'll be using several different colours, because we don't need smooth transitions this time. Call up the Range requester, and make this range Five. As you can see, this is a mixture of 14 colours, alternating yellows, reds, oranges and blacks. The black, incidentally, is to add a realistic flicker as a flame bursts into life then disappears. Set the rate to 44, and click on OK. Now, with cycle selected from the modes menu (or key F7), and a medium sized brush, draw the flames on the spare screen using one of the colours you've just placed in the range. Turn on cycling to see the effect as you paint until you get a pleasing effect. You may also want to smear the topmost flames to give a more realistic look. Once you've done this, you can add the flames to your text, as seen in the final stage of the illustration.

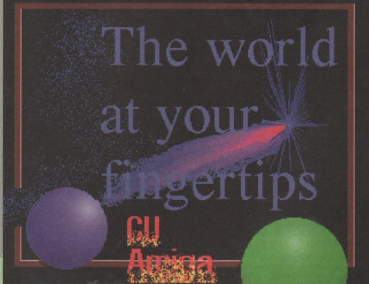
STEP 8

The final touch to the illustration is the comet. Although it's the last thing to draw, we can put it behind everything else by using the stencil. The comet itself uses its own range, so call up the requester (second nature by now...), and make this range Six. Place the colours 254 to 256 on the placement bar, with a rate set to 63. This gives a great purple/mauve look which really



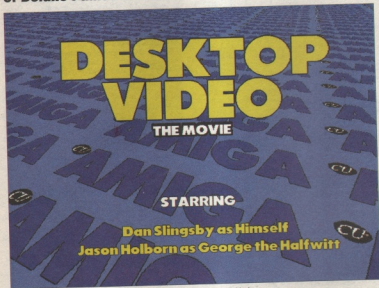
throbs when its cycled. OK that, and from the fill requester, select contour, and ensure range Six is active. Next, switch to the spare page, and draw out a similar shape to our illustration, and watch DPaint fill it in beautifully. You can smear the edges to add realism if you like. Cycle this and you'll be transported back to the psychedelic 60s! To add the comet behind your work, pick it up as a brush, switch back to the main drawing screen, and call up the stencil; requester. Click on the first colour (Black), and click on Invert. OK that, and place your comet. Turn off the Stencil, and press the TAB key and watch all your hard work burst into life. **CU**

STEP 9 - THE FINISHED PRODUCT.



You don't need a desktop video titling program to create fantastic video titles. Jason Holborn reveals the video talents of Deluxe Paint IV.

VIDEO



DPaint's perspective mode can be used to add a whole new dimension to your titles!

As any Amiga owner what they automatically associate with Desktop Video and chances are you'll get the same answer over and over again. Fact is, most people see Desktop Video as simply adding titles to video. Of course we all know that video titling is a fairly small aspect of what is possible with an Amiga connected to your desktop video setup: video editing, 3D rendering, video effects and animation are only a small sample of what you can squeeze from your Amiga. We'll be covering all the subjects and more in future issues, so stay tuned if you want to add that little bit of extra sparkle to your home video productions.

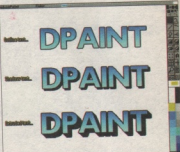
Before we get too bogged down in such things as video editing however, let's take a step back with a look at video titling, one aspect of desktop video that is immediately usable to most home video enthusiasts. Time to shatter a misconception, methinks — most people seem to think that you need a video titler to produce titles, but this needn't be the case. Sure, a program like Alternative Image's Big Alternative Scroller or even Scale HVF (Home Video Tiler — you'll find a demo of this brilliant tiler on last month's coverdisk!) gives you unrivalled control over your video titles, but there's no reason why you couldn't produce some very nice titles and even video animations with nothing more than a copy of Deluxe Paint.

TYPOGRAPHY

The arrival of Workbench 2.0 and the more recent AGA chip set has made video titling with DPaint that bit easier thanks to the increased colour

palette and, more importantly, outline font support. Getting decent video fonts was perhaps the main stumbling block for most video producers on a budget, but Workbench's new outline fonts give you the power to expand a font to any size with little or no loss in quality whatsoever.

The basic Workbench system disks come with two outline fonts as standard — CStimes and CStMiravirte (AGFA's version of the standard Helvetica font) — but a whole range of additional



You don't need to buy a dedicated video titling program to create fantastic titles — Deluxe Paint is more than enough for the job! (CV what about women enough for the job — Lisa.)

fonts suitable for video work can be bought from many public domain libraries. Most of these PD fonts are in Adobe Type 1 format, but many Public Domain houses will happily convert them to AGFA/Compugraphic format suitable for use with Workbench and DPaint.

All versions of DPaint will happily handle outline fonts but you really do need to get your hands on DPaint Version 4.0 if you want complete control over your fonts, as this version of DPaint allows you to specify the size of the font simply by typing it in to the DPaint font requester. Once you've picked the font in the size you want, DPaint gives you full control over where on the page it should be placed.

Even if you're not completely sure, you can easily pick up your title as a brush, delete the old version and then paste it down in its new position. DPaint's brush operation also comes in particularly handy when designing video titles — brushes can be resized easily by simply pressing "shift" and then the "Z" key.

PAGESTREAM VIDEO

One program that I find particularly useful when producing video titles is Soft-Logic's PageStream desktop publishing program. Okay, so PageStream may not seem immediately useful as a video tool, but believe it or not, it is actually great for producing original video titles. Although I'm not trying to claim that PageStream will handle all your video titling needs, there's one aspect of PageStream that leaves all video titling programs for dead — its ability to manipulate outline fonts.

As any PageStream owner will tell you, PageStream excels at rotating, stretching and slanting text with no loss in quality. Of course you can't save PageStream documents out as IFF picture files, so you will need a screen grabber such as the PD program QuickGrab (the grabber I use) to grab the PageStream screen as an IFF file. Once this is done, you can then load the grab into Deluxe Paint, paint out the sections you don't want and — voila! — high resolution titles that would make even Scale users green with envy! We'll be covering, both using PageStream for video titling and indeed outline fonts in general, in the next issue, so if you find



PageStream may not seem an obvious choice for video titling, but you'll be surprised just how good it really can be. These titles were grabbed from PageStream and then touched up in DPaint.

PageStream being sold off extremely cheaply, I strongly advise that you get your hands on it.

VISUALS...

You can also rotate a brush to any angle, shear it and even rotate it in three dimensions using DPaint's powerful "perspective" feature.

DPaint VIDEO EFFECTS

Titling effects such as outlines, shadows and even 3D extrusion are very easy to create in DPaint too. To apply an outline to a title, pick it up as a brush, select the colour you'd like to use for the outline and then press the "o" key and DPaint will automatically add an outline for you. Shadows are just as easy too – just pick up your title, click on the colour that you'd like to use for the shadow using the right mouse button and then stamp the title down with the right mouse button, offset the title by a couple pixels and then stamp it down again with


the left mouse button. Good eh!

Three dimensional "extruded" text can look very professional and it's relatively easy to create in DPaint. Start by picking up your title as a brush and then select the colour that you'd like to use for the extrusion by clicking on the colour with the right mouse button.

Next, select the "line draw" function and then move the mouse pointer over the point where the extrusion is to start, hold down the right mouse button and then drag the mouse pointer slowly across the screen until the height of the extrusion is to your liking. When you release the right mouse button, the extrusion will be pasted onto the screen but you'll still have to realign the title over the top of the extrusion and then paste it

down with the left mouse button to get the full extruded effect.

CONCLUSION

DPaint is ideal for producing video titles, but it does have a number of limitations. For starters, it can only be used to display a maximum of two screens worth of titles, and even then, you cannot produce the sort of fancy wipes, fades and scrolls that are the hallmark of a decent video titling program. One solution would be to buy a video "slideshow" program such as Elan Performer – this can be picked up for around £20 these days, so it's hardly going to break the bank. Combine DPaint with Elan Performer and you have a video titling system that can easily trade punches with dedicated titlers. 

TIP TOP TITLING TIPS

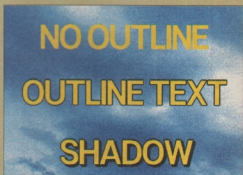
With the arrival of the AGA chip set and its fantastic 16.7 million colour palette, not to mention those lovely 256 colour and HAMB screen modes, it's all too tempting to go to town when designing your video titles. As any designer will tell you, however, there are rules that equally apply to desktop video designers as they do to artists, desktop publishers and designers in general. Follow these simple rules and your video presentations will not only be easier to read, but far more professional too.

1. When deciding how many colours to use in your titles, the unwritten rule "less is more" definitely applies. Creating titles with hundreds of different colours may look nice on your RGB monitor, but they'll be virtually unreadable once keyed over a live video signal. If you check out the sort of colour palettes the professional video producers use (just sit in front of your television for a few hours and you're bound to see plenty of titles) and you'll notice that they generally tend to restrict their titles to just three or four well balanced colours.
2. Try to avoid colours that are garish. Once again, they may look very nice on your RGB monitor, but they'll look absolutely awful when genlocked. Possibly the worst colours you could use, have to be bright red and blue – these look particularly bad when recorded in VHS equipment, although S-VHS and broadcast quality signals carry them better. Once again, the best bet is to take a look at the sort of colours the professionals use – most use whites, light blues and yellows.

It's important to match the colours you use for your titles

with the overall colour of the live video signal that you're going to key the titles over. If the live video signal is very dark, for example, then there's little point in using a dark shade. Similarly, white titles will look awful on your hold-time video of you skiing in the South of France. In a case like this, yellows or light blues would stand out much better.

3. Even when using colours that aren't garish, it's always worth putting a solid black outline around your titles to stop them from "bleeding" (i.e. picture quality degradation). Most video titling programs will do this for you, but it's just as easy to do in DPaint – select black, pick up your titles as a brush and then press the "o" key. You can then paste them back down onto the screen. If you're lucky enough to own a program like Scale HVT (a demo of which was on last month's coverdisk), then you're given control over the outline colour and thickness.
4. When choosing which font your titles should be displayed in, try to make sure that the style is both easily readable and large enough for the viewer to read from a distance. A 24-point title may be very readable on your Amiga's monitor, but try genlocking it and then view it from four metres (12 foot) away – unless you've got the eyesight of a hawk, I can



Adding a solid black outline around your titles can help them to stand out and will also cut down the amount of colour "bleeding" that will result from keying them over a live video signal.

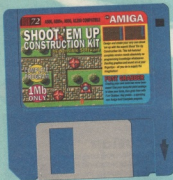
guarantee you that your titles will be virtually unreadable in high resolution interlaced mode, font sizes anything less than 32 point aren't really that useful. The font typeface is very important too – ornate fonts such as Zapf Chancery or any freestyle font may look nice, but they're not very readable. Try to stick with standard Sans-Serif fonts such as Helvetica or Avant-Garde. Serif fonts such as Times look nice too.

5. Always plan your titles before you commit yourself. Although it is easy enough to make changes, it only adds to the hassles if you have to create a new master tape with the necessary changes. If other members of your family or friends are involved and you wish to credit them, think very carefully about the order of these credits – although your mate Dave may think that his contribution was the single most important part of the entire production, chances are that other contributors will have something to say about it. As the old saying goes, 'You can't please all of the people all of the time' so be as diplomatic as possible. In general, however, the "Stars" of your production should come first, followed by the production team.

Delpaint IV is available from Electronic Arts
(tel: 0753 549 442) Price: £89.99.



Garish colours should be avoided at all costs. Don't forget that you're trying to grab your audience's attention, not throttle them!



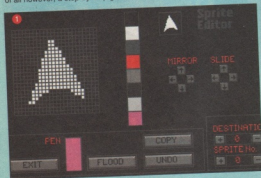
SHOOT 'EM UP CONSTRUCTION KIT

PART 2

John Kennedy takes a further look at creating a game from scratch, and discovers some of the finer points in the process.

Probably the best way of learning to use any software is to sit down and use it, and for this reason, I've been creating some SEUCK games from first principles. Ageing hippy that I am, one of my all time favourite games is Asteroids – that black and greeny-white, vector-based rock-pummeling classic.

Although rather simple by today's standards, Asteroids offers many opportunities for expansion. Once you have this version working, you'll be able to update it to the latest 1994 specifications. First of all however, a step-by-step guide:



It might look like a Star Trek badge, but it's a 1990's Asteroids ship, honest.

1. CREATE THE SPRITES.

The first consideration is to draw the sprites. Unfortunately, here we meet a snag: my drawing capabilities. I hope you can bear with me and my awful scribbles. Just squint a little and wave a hand back and forwards in front of your face and the graphics will look a lot better.

The player's ship in Asteroids is nothing more complicated than a small triangle. It rotates left and right to face in eight directions, so the first task is



Each ship position needs its own sprite. Make sure "Direct" mode is selected.

to draw eight different ships. Thankfully the "Copy" and "Mirror" options mean we only need to draw three original ships. Start with "Sprite 0" and draw a ship facing upwards. Next, adjust the destination number to 4 and use Copy. Now select sprite 4 and use the mirror button to flip it around so it's facing downwards.

Repeat this operation with two more ship drawings, one facing top-right and the other right, until all eight positions are looking good.

(See fig 1.) The next stage is to create bullets which the ship can fire. You'll need a vertical set, a horizontal set and two angled sets. Although, the Copy and Mirror function will help you out here.

Draw a big mean-looking asteroid, a small flying saucer, some flying-saucer type nasty bullets and dozens of explosions for dead spaceships, rocks and saucers.

2. DEFINE OBJECTS

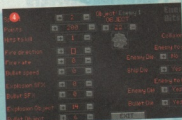
From the object menu, select the "Edit Object" option. Adjust the "Object Number" until Player 1 appears. Now make the player's ship "Direct" instead of "Animate"; this will make sure the ship's sprites turn to face the direction the joystick is moved in. Make sure "Held" is on. For each of the positions around the central pair of sprites, select the appropriate sprite and click on the box. Eventually you should have a display like mine, but with much better graphics, of course. (See fig 2.)

Make the bullet objects in the same way. Remember to switch from "Animate" to "Direct". (See fig 3.)

Now create the rock objects. If you designed several different rock sprites you can use the Animate feature to make them appear as though they are tumbling.



The laser death that splits from your ship also needs defining and fine tuning.



The "definitions" in the Enemy Bits screen control how fast the asteroids will travel. The flying saucer can also shoot at you if you set the right values.

3. ADJUST ENEMY BITS

Adjust the settings for all the enemy asteroids so that the settings match those shown.

The flying saucer is special as it can fire its own bullets, so set the relevant boxes to some new values depending on how nasty you want the saucer to be. (See fig 4.)

4. CREATE A BACKGROUND AND SOME SOUND

No game is complete without a starry backdrop. Define a few blocks with white dots and you're ready. The easiest way to add sound effects is to load some from a previous game. Save what you've done of your Asteroids game to data, and then load the game whose effects you wish to



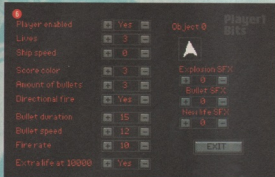
Add an amazing star-filled background in a second – use the block editor.

"borrow". Save them individually from the Storage menu, reload your Asteroids game and then load in the sound effects. (See fig 5.)

5. PLAYER LIMITATIONS.

Copy the settings on the player limitation settings. If you change the ship's speed from 0, it can move around – a bit like the thrust feature of the original game. (See fig 6.)

Now adjust the play area. Hold the joystick left, and then press fire – the asterisks will move. Do the same for up, down and left so that the asterisks encompass the entire screen.



The Player Bits will control how much a-shootin' and a-movin' your ship can do. Use it to fine-tune gameplay.

Set the start position to be exactly in the middle of the screen.

7. ATTACK WAVES

Taking each enemy asteroid in turn, move them across the screen towards the central ship in a menacing way.

When the game is played, this is how the rocks will appear. Add the evil enemy flying saucer every so often to heighten the overall general excitement.

8. LEVEL CONTROL

Change the level type from scrolling to still, and make the delay time 2,000.

9. TEST

Now you're ready to play! The cheat option will give you infinite lives while you fine-tune the enemy attack waves. When finished turn the colour of your TV down, the brightness up and play some Pink Floyd - time warp!

The finished game in all its glory. Don't give up the day job, eh John?

A4000 AND HARD DRIVE HINTS

When using SEUCK on A4000 Amigas you might find you need to select an older display mode and/or adjust the CPU caches. To do this, reset the computer with the CTRL-AMIGA-AMIGA keypress, and then keep both mouse buttons held down. Select the "Display Options" gadget, and make sure the Original chipset is selected. Then click on the "Boot options" gadget and put a tick in the "Disable CPU caches" box. Now select boot and continue as normal. Installing the game on a hard drive is easy: boot from your hard drive as normal, open a window on your normal work partition and then drag the editor SEUCK disk icon into it.

The entire disk will be copied, and a drawer will be created automatically (this is a Workbench 2 and above feature).

Now use the game disk disk in the df2: drive as normal. Note: if you want to delete the games that came with it, remember that not all files have icons, so use Show... All Files from the Workbench menu.



WIRED WORLD

Want to connect your computer to the world, for the price of a local call? Join John Armitage as he works his way through the FidoNet system.

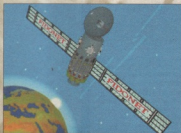
We've seen what FidoNet is, and what it can do for you, but here's a summary for newcomers: FidoNet is a global network of BBS systems which share mail and programs. You can contact your local FidoNet BBS and send Email to any other user, anywhere in the world.

FidoNet is far from being an Amiga specific system, but that really doesn't matter. The people who designed it made sure it worked with a set of standard protocols, so any computer capable of using a modem could take part.

To get connected all you need is an Amiga, a 2400 baud or better modem and a telephone line. You'll also need the telephone number of at least one FidoNet compatible BBS.

THE INS AND OUTS

The first piece of software you'll need is a mailer. This is a program that logs onto your BBS system, uploads your outgoing mail and downloads your



With FidoNet your Amiga is a doorway to the global highway.

incoming mail. The more automatic the process the better, as you don't particularly want to spend a long time on-line. The quicker your mailer (and modem), the cheaper your telephone bill.

The Amiga program, *TrapDoor* is probably the best program to use. It's far from simple, but it does come with a very comprehensive manual which all potential FidoNetters should read every night before going to bed.

Essentially, you adjust some settings to reflect your personal FidoNet address and modem, and then create two drawers: one for in mail, and one for out mail. When you call the *TrapDoor* program (CLI only at this stage, I'm afraid) the program will automatically dial your local BBS and perform the necessary exchange of mail. *TrapDoor* is full of

Amiga specific features such as AFREX, so with a bit of time you can soon make it as complicated or as simple as you like.

Theoretically this is the only program you'll need, but reality is another story. To start with, using the standard Amiga ED program to read and write Email is extremely tedious. There are some excellent text editors in the PD, although I have to say that ASDG's *Cygnus Ed* v3.5 is my favourite.

If this still isn't enough, and you want a nice intuition based front end, then track down a program called *Point Manager*. This is a program which works in conjunction with a mailer program such as *TrapDoor*. *Point Manager* will make reading and writing Email messages a lot simpler. It even has its own editor!

Using a well configured FidoNet system like this is a dream. For almost negligible cost, you can soon be embroiled in conversations all around the world. Replying to Email is only a matter of entering text at your own keyboard, at your own pace. The system automatically sends on your replies when you want to. Welcome to the world!

Ask your favourite PD library about the software mentioned above. Alternatively, buy the *AmNet CD Rom* collection as it contains many Mb of FidoNet specific programs. **CU**

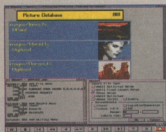
NEXT MONTH

More tales from the FidoNet as John Armitage tells you how to avoid viruses.

New Software for a New Year



Business Applications



Both SBase Personal and Professional are full-featured, fully relational and powerful databases with pull-down menus, multiple windows and full access to your Amiga's multi-tasking environment and they are now compatible with AmigaDOS 3.0 and the AGA chip-set.

SBase Professional includes a powerful database management language and supports AReX. Please call for our datasheets on these superb products.

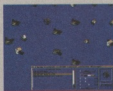
We are pleased to announce that HiSoft is now the authorised UK contact point for Oxo's SBase 4 Amiga products (formerly known as Superbase). We have stock of both SBase Personal 4.1g and SBase Professional 4.1g and offer full technical support for these programs with our Silver and Gold support options. We can also offer upgrades from earlier versions - please call or fax for details of upgrades and technical support.

SBase 4

Professional
Personal



Utilities



This is the utility that you simply must own! Maxon Magic is a fantastic combination of 15 different screen savers, a system event sound player and many amusing sampled sounds that will not only be incredibly useful but will give you and your friends endless enjoyment as well.



Maxon Magic



The Maxon Magic screen saver works in all modes, even with graphic cards, and offers you a choice of 15 different amusing and entertaining modules such as Aquarius, Flying Breakfast, Fireworks, Crazy Worms, Messages, Clock etc. As if that isn't enough value for money, Maxon Magic also lets you assign sounds to most system events including Window/Screen open & close events, Alerts, Keys, Mouse clicks, Requesters and more. Choose from the many sounds provided or simply use your own sampled IFFs!

With Maxon Magic your Amiga will never look or sound the same again!



Video/Music



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ColourMaster is a new electronic colour splitter which works in conjunction with VideoMaster for stunning colour stills.



Clarity16 is our premier sound sampler allowing rates up to 32KHz in 16 bit stereo and up to 48KHz in 16 bit mono on an A500; accelerated machines can handle faster sampling rates. The software provides extensive features including full edit control, a MIDI keyboard emulator, a sample sequencer, many special effects and FFT analysis. Version 1.5 has an up-to-date Workbench 3 lock, in its own window and is fully compatible with faster Amigas.



Megaloud is the new 8-bit, stereo, direct-to-disk sampler package: the software is packed full of easy-to-use editing features, special effects and extras such as the ability to print waveforms and sample information. The package allows sampling up to 84KHz mono and 56KHz stereo to memory and up to 21KHz stereo to hard disk on an A1200. Supplied with a hardware volume control and an extensive 144-page manual, Megaloud is impressive value at only £34.95.



Programming



SAS/C 6.5

The standard C compiler for AmigaDOS gets a major upgrade for 1994; now the SAS/C Development System (version 6.5) supports translation of C++ files with Streams and Complex libraries allowing you to write Object Oriented code.

The C++ translator is compatible with CFRONT Version 2.1 from AT&T. There's an improved peephole optimiser, more efficient stack extension and structure return code generation.

There are many other improvements including an enhanced instruction scheduler for the 68040 CPU and the 68882 maths coprocessor, an improved profiler, a friendlier interface to grep, support for C++ within CodeProbe and more. Workbench 3.1 include files are supplied. Upgrades start from £59.95 - please call for pricing information.

Prices

Clarity16 new price	£129.95
Megaloud	£34.95
VideoMaster A500	£69.95
VideoMaster AGA	£79.95
VideoMaster RGB	£129.95
ColourMaster	£69.95
SAS/C 6.5	£329.00
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All products on this page are either available now or by the end of January '94 - please call to confirm availability.

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BACK TO BASICS WITH BLITZ BASIC²

Jason Holborn puts on his leotard and gets into shape with *Blitz Basic 2*. Eat your heart out Mr Motivator!

Regardless of the type of game you'd like to write with *Blitz Basic 2*, chances are you'll want to use sprites sooner or later. Fact is, sprites are a fundamental ingredient of any modern arcade game, be it a common or garden shoot 'em up, a Street Fighter-beating combat game or even one of those hard-to-categorise "weird" games that magazine game reviewers seem to love so much these days.

What you may not have realised, however, is just how important sprites are. Take a shoot 'em up, for example, virtually every object that you see moving on the screen is a sprite — the player's ship is a sprite, the attacking alien spacecrafts are sprites and even the missiles and explosions that litter the screen are sprites.

With the advent of the Amiga, the term "sprite" has become something of a generic term that refers to any object that moves around the screen, rather than a particular type of object. If you know your Amiga's hardware, then you'll already know that the Amiga offers two types of sprites — the technically correct "hardware sprites" and the more commonly used "blitter objects" (called "software



Sprites are used in most arcade games — in a shoot 'em up, for example, all the moving objects you see on the screen are sprites.



sprites"). Both have their own individual strengths and weaknesses which are as follows.

HARDWARE SPRITES

Hardware sprites are generated by the Amiga's display hardware and are completely separate from the

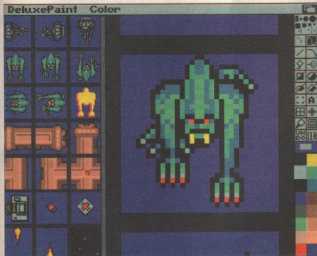
screen "bitmap". As a result, hardware sprites stay the same size regardless of the resolution of the screen that is displaying them. By default, all hardware sprites are displayed in low resolution. However, if you're lucky enough to own an AGA-based Amiga, hardware sprites can also be displayed in high resolution. However the Amiga imposes quite a few restrictions on

the size, the number of colours and the number of hardware sprites that you can display. At their simplest level, only eight hardware sprites can be displayed at once (one of which is the mouse pointer) although you can re-use hardware sprites by performing some clever trickery with the Amiga's copper display co-processor. Hardware sprites are restricted to just four colours too, one of which is transparent. Once again, however, you can get around this by doubling up sprites so that two sprites are used to display one fifteen colour sprite. The size of sprites is restricted to just 16 pixels across although you can join together several sprites to form a much larger single sprite. However hardware sprites move very quickly indeed, which is why most games use them for missiles and other objects that have to move across the screen very quickly.

SOFTWARE SPRITES

However, only a few computers can utilise hardware sprites. As far as I'm aware, only the Amiga, the Commodore 64 and the old Atari 800 offer hardware sprites. Software sprites, on the other hand, are used on most micros as they need very little specialist hardware to incorporate them. In the case of the Amiga's software sprites, they're drawn directly into the screen bitmap by the Amiga's blitter chip, hence Amiga software sprites are more commonly referred to as "blitter objects" (or "bobjs").

The great thing about blitter objects is that their size is restricted only by the amount of chip memory inside your Amiga. Bobjs also don't suffer from the same colour limitations as hardware sprites — it's perfectly possible to create a bobj with up to 64 colours (or even 256 when the AGA version of Blitz



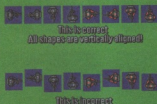
Blitz doesn't have its own sprite editor so all "shapes" have to be designed in an IFF paint program like DeluxePaint.

GET INTO SHAPE

Designing shapes in a paint program that will be suitable for use within the Blitz ShapesMaker utility isn't as straightforward as you might first think. However, follow these simple guidelines and you won't go wrong:

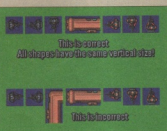
ALIGNMENT

Because the ShapesMaker utility extracts shapes from an IFF file in horizontal strips, it's very important that each row of shapes is aligned on exactly the same line across the screen. If a shape is just a single pixel too far up the screen or too far down, the ShapesMaker will not recognise it.



SIZE

Blitz isn't fussy about the horizontal size of your shapes, but it is very fussy about their vertical size. Once again, this all comes down to the way that the ShapesMaker utility scans through the IFF file. As a result, all shapes that are in the same row must be of exactly the same vertical size. If, for example, the first shape is 32 pixels down, then all the other shapes on the same horizontal axis must be that size too.



» is released!). Because the Amiga's blitter simply pastes a bob down onto the screen, bobs are treated as nothing more than an extension of the current bitmap. This does mean, however, that the resolution of a bob is dictated by the resolution of the current screen.

The only real limitation of bobs is the amount of time they take to be drawn. The Amiga's blitter may be able to run rings around even the fastest processor, but drawing bobs still takes time – much longer than it takes the Amiga's display chip to draw hardware sprites, that's for sure. However, thanks to Blitz Basic's quickness, this minor speed limitation does not affect the quality of your code.

BOB'S YOUR UNCLE

Blitz Basic supports both software and hardware sprites through an impressive set of commands that give you full control over their placement and movement. We won't be discussing hardware sprites for a couple of months or so, but as any games programmer will tell you, software sprites are far more versatile so we'll be concentrating on them instead for the meantime.

In Blitz Basic, blitter objects have a new name that is relatively unknown amongst Amiga programmers – for reasons known only to Mark Szib and the rest of the crew at Acid Software. Blitz refers to its blitter objects as "shapes". This can be confusing for the first time Blitz user, but you'll soon get used to it. Before you can write a program that makes use of shapes, you need to create some shapes. Unlike AMOS, Blitz doesn't actually offer a dedicated 'object editor' (or 'shape editor') so you have to create your shapes using an IFF paint program like Deluxe Paint. Instead, this really isn't too much of a bind, as even most AMOS owners use DPaint for designing bobs anyway.

Once you've drawn your shapes in DPaint, you must then save them onto disk as an IFF picture file which is then loaded into the Blitz's "Shapes-Maker"

utility which is bundled with the Blitz package. This very simple utility scans through your IFF image and picks out any shapes that it finds which are then saved onto a disk as a shapes file which can later be loaded into your Blitz program. Although the ShapesMaker utility is very simple, it's important that you follow a few guidelines when designing your shapes, so it's worth taking time to read the box out above to find out how it's done.

BLIT ON THE SIDE

Unlike AMOS, Blitz Basic 2 doesn't just give you a single set of commands for drawing shapes onto the screen. Because of the technicalities involved, you're provided with three separate sets of shape drawing commands, each of which has its own individual strengths and weaknesses. Which set you use depends upon the type of game you're writing and the screen mode that your game uses. Let's take a look at each "blit mode" in turn.

BLIT

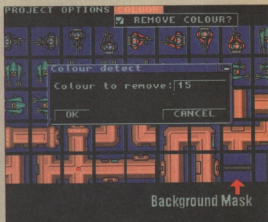
Blitz's simplest method of drawing shapes onto the screen is the Blit mode. Although this is undoubtedly the fastest mode available, it does have a number of disadvantages that make it somewhat less useful for games programming. For starters, this mode does not allow you to keep track of where the shapes have been drawn – once they've been drawn onto the bitmap, Blitz forgets all about them. If you then decide that you'd like to move a shape that has been drawn in this mode, it's up to you to manually remove the old shape image from the screen, restore the background image and then redraw the shape at its new position.

QBLIT

QBlit mode is somewhat more useful as it does allow you to keep track of any shapes that are

MASKING

When designing shapes, it often helps to set aside a single colour which can be used as a background "mask" colour. Not only does this help to keep a check on both the size (using a background mask will allow you to create shapes that are vertically smaller than the rest of the shapes on the same line) and vertical alignment of your shapes, but it also helps to keep your shapes centralized. When you convert your shapes image to a shapes file with the ShapesMaker utility, you can ask it to automatically remove the background mask so that it is made transparent by making use of the ShapesMaker's "Remove Colour" option. Simply tell it which colour you've used as your background mask and the Shapes Maker will remove it when the shapes are converted.



drawn onto the screen. Whenever a shape is redrawn at a new position on the screen, Blitz will automatically remove the old shape image from the screen.

As always, there has to be a down side – QBlit mode does not restore the background image and, therefore, it is probably best suited to games that either use a blank background or a dual-playfield display.

Surprisingly, QBlit mode is the most popular blitting mode amongst Blitz games programmers despite its obvious shortcomings. Because of its obvious speed advantages over BBlit mode, most Blitz games use a combination of a dual-playfield display and the QBlit mode to allow shapes to be moved rapidly across a background. Take the Blitz demo game BuzzBar, for example – because BuzzBar uses a dual-playfield display, the shapes are drawn onto the foreground playfield using QBlit mode whilst the background remains untouched in the background playfield.

BBLIT

The most capable blitting mode available is BBlit mode. It offers most of the advantages of QBlit mode but, unlike QBlit mode, it also automatically restores the background image whenever a shape is moved. BBlit mode is most like the blitter object commands in AMOS as it handles everything for you. BBlit mode is rather slow, however, so it is rarely used in arcade games that require lots of fast-moving shapes. ☹

NEXT MONTH

Now that we've looked out how to create a shapes file and the different types of 'blit mode' that Blitz Basic 2 has to offer, I'll be demonstrating how to use shapes within your own programs in the next issue. Stay tuned!



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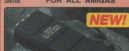
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Dave Smithson demonstrates how to have an argument with your AREXX scripts without ending up in hospital.

INSIDE AREXX

Very few AREXX scripts will run without some form of user interaction and control, especially if the script is designed as a general purpose tool. Up until now, the scripts that we've been writing have been controlled by the user via the very useful "pull" command which acts in a very similar manner to BASIC's "input" command. Whilst this form of interaction certainly does the job, it's not very practical if you want to use your AREXX script within an AmigaDOS script (batch) file.

Say, for example, you wanted to write an AREXX script that was controlled by the output from another program. Using the "pull" command, you'd be forced to enter the information yourself via the

keyboard but wouldn't it be so much nicer if you could write AREXX scripts that worked like AmigaDOS commands?

Being an AREXX programmer, I'm sure that you already have a basic working knowledge of how AmigaDOS commands work (let's face it, the AREXX language is fairly inaccessible without some knowledge of AmigaDOS). To be perfectly honest, there isn't really a lot of difference between AmigaDOS commands and AREXX scripts (well, apart from the language that was used to write them).

AmigaDOS commands have one feature that makes them useful for scripts — command line arguments. Command line arguments are a lot better than the interactive prompts that we've been using so far as they allow you to feed a script all the instructions it needs in order to run, allowing you to leave it to get on with the job. Say, for example, you wrote a script similar to the AmigaDOS "Delete" command. If you had to feed the script the name of each and every file that you wanted to delete as and when the script was ready to process it, you'd have to sit in front of your Amiga and wait for the script to process each file. By feeding the script all the filenames (or even a wildcard pattern) from the command line, you could leave it to do its stuff whilst you got on with something more productive (isn't multi-tasking wonderful?). Adding the ability to accept command line arguments to AREXX scripts also makes AREXX an

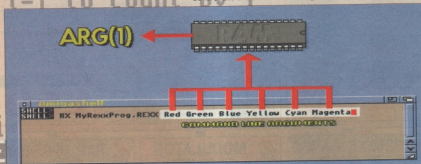
ideal candidate for writing your own AmigaDOS commands, without having to resort to more complicated languages like Assembler or C.

COMMAND PERFORMANCE

Not surprisingly, AREXX supports command line arguments using a very powerful function called "Arg()". Adding command line arguments to your own scripts is surprisingly simple too — certainly a lot easier than it is with a language like C or even assembler. What you may not have realised is that AREXX supports command line arguments without the need for extra code — yes, even the scripts that we have been examining over recent months would have accepted command line arguments if we had known how to process them. As it was, even if you had fed a script command line arguments, AREXX simply ignored them.

So how does the Arg() function work? Well, it's very simple really. Whenever you run an AREXX script and pass it command line arguments, all the arguments that you pass are bundled together into a continuous string that is held internally within the AREXX interpreter. This string is automatically handed to the Arg() function. All you have to do to access it is to interrogate the string that is returned by the Arg() function using a line similar to the following:

```
arguments = arg(1)
```



Whenever you pass arguments to an AREXX script the Amiga stores them into a conventionalising in memory that is automatically made available to the Amiga shell.

STRINGS AND ROUNDABOUTS

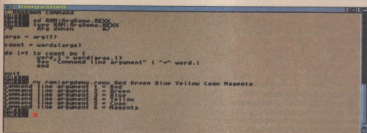
Both AREXX arrays and the string functions that the above script uses are new concepts that we haven't covered in previous issues so let's take a quick look at them before we move on any further. First, AREXX arrays. If you've ever used a programming language like C or Basic, then you should already be familiar with exactly what an array is. Put simply, an array is a special type of variable that can hold more than one item of information — a whole lot of numbers or strings, for example. The great thing about arrays is that they allow you to bunch together and organise a lot of data items under a single name, if you were writing a database, for example, all surnames could be stored in an array called 'Surnames'.

AREXX arrays are particularly powerful as — unlike Basic — you don't need to tell AREXX how many individual items of data you wish to store in an array. What's more, you don't even have to define an array before it is used — simply start using an array and AREXX will automatically create it for you. Each separate item of data within an array is accessed by appending a dot symbol (".") followed by the number that tells AREXX where in the array you'd like the data to be held to the end of the array's name. Say, for example, you wanted to store the surname "Smith" in an array called 'Surnames' at position two. All you'd need to do is to use the following line of code:

```
SMITHNAME = 'Smith'
```

But please use carefully at the first demonstration listing, you'll also notice that it makes use of two functions that we haven't yet encountered — Words() and Word(). Although their names are rather similar, their uses are somewhat different. The first of the two functions, Words(), is really nothing more than a word counting function — all it does is to tell you how many words there are in a particular string. This is very important when extracting arguments from the command line as you may not always know exactly how many arguments the user has passed. By passing the output from 'arg()' to the Words() function, however, you'll know exactly how many arguments are in the string.

The second function, Word(), is very similar to the 'Scan()' function in the C programming language. What it does is to allow you to extract a given word from a string which is then transferred to a second variable. All you have to do to pass it the name of the string that you're extracting a word from and the position of the word in the string (which word it is — two, three or five etc) and the Word() function will do the rest. Clever stuff eh!



Adding the ability to accept command line arguments to your AReXX scripts is surprisingly simple.

This line simply transfers the string of command line arguments to an AReXX variable called "arguments". Once the string has been transferred, you can then gain access to the arguments embedded within the string using a combination of AReXX's powerful string manipulation functions. If you're only passing a single argument to a script, then the string returned by the Arg() function will contain only a single argument and so it can be used without the need to strip out individual words. It's worth noting, however, that each word that you pass to an AReXX script is treated as a single argument and so if you were to pass something like CU AMIGA as a single argument, AReXX would treat it as two arguments.

In most cases, your AReXX scripts will expect to be fed more than one argument and so you need some way to extract each argument from the string that is returned by the Arg() function. Thankfully, due to a combination of AReXX's powerful arrays feature and string handling commands, this is very useful. Here's a demonstration listing that you can type in that will demonstrate how to strip out arguments.

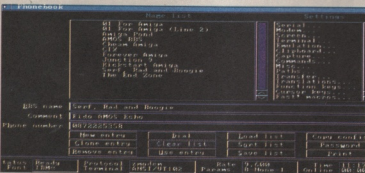
```
/*AReXX 'Arg()' function demonstration

/*Get arguments from command line*/
cmdline = Arg()

/*How many arguments?*/
count = Words(cmdline)

/*Extract arguments*/
Do loop=1 To count By 1
/* Extract next word into array
argument.loop = Word(cmdline,loop)

/*Display word...*/
Say "Argument" loop "=" argument.loop
End
Exit
```



Command line arguments are particularly useful when writing general purpose scripts to control external applications such as the Term 3.2 communications program.

PARSE IN ACTIONS

Below is the complete listing for a short program called VAT Calc that demonstrates how to write a tool that makes use of command line arguments. The program provides two functions – it adds VAT to a value and also takes it away if you need to know a price minus VAT. Even if you're not VAT registered, you may find this simple tool very handy when calculating the price you have to pay when ordering goods from mail order companies that quote their prices minus VAT. Simply pass it the VAT rate as a percentage (17.5, for example), the price and either an "M" if you wish the VAT to be taken off of the price or "P" if you wish VAT to be added. Internally, the program is nothing special. The only function that it uses that we haven't already covered is "Trunc()" that simply allows you to control how many decimal places in a floating point number are displayed. All you need to do is to pass the floating point number followed by the number of decimal places required and the Trunc() function truncates the value to the required number of decimal places. Give it a try!

```
/*VAT Calculator
/*Parse Arg RATE AMOUNT OPT
Say "VAT Calculator"
If RATE = "?" then do
Say "Usage: VATCalc <VatRate>
<Amount> <D>minus/<P>plus"
Exit
End
If OPT="P" then do
VATAMOUNT = AMOUNT/100*RATE
VATAMOUNT = Trunc(AMOUNT+VATAMOUNT,2)
Say "£"AMOUNT "+" VAT = "£"VATAMOUNT
Exit
End
If OPT="M" then do
VATAMOUNT = AMOUNT/(100+RATE)*RATE
VATAMOUNT = Trunc(AMOUNT-VATAMOUNT,2)
Say "£"AMOUNT "-" VAT = "£"VATAMOUNT
Exit
End
```

from within a string. If, for example, you passed it a string such as "CU AMIGA Magazine", it would return CU AMIGA Magazine. Anyway, here's a quick listing that demonstrates the Parse Arg command in action.

```
/*Parse Arg demonstration

/*Get command line arguments*/
Parse Arg arg.1 arg.2 arg.3 arg.4

/*Strip out leading character*/
arg.4 = Space(arg.4)

/*Display arguments...*/
Do loop=1 To 4 By 1
Say "Argument" loop "=" arg.loop
End
Exit
```

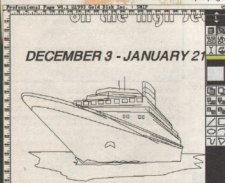
NEXT MONTH

If all this talk about arguments hasn't got you too flustered then stay tuned for next month's issue in which we'll be taking a look at how to use AReXX to automate the operations of another program. Many of you have asked for a round up of books available that cover the AReXX language so, just to prove how much notice we take of your letters, you can look forward to a mega AReXX books roundup too!

DESKTOP PUBLISHING WORKSHOP

PART 1 In the first of a two-part tutorial, John Dodds tells you all you need to know about desktop publishing on your Amiga.

As the professional packages are only a little more expensive, even budget desktop publishers should consider spending that little bit extra rather than plumping for the cheaper and more limited PageSetter.



Desktop publishing doesn't have to cost a fortune. The secret is to learn and accept what you can't do, and then work within those limitations. Plenty can be done with just the bare essentials, and to a fairly high quality. But what exactly are the bare essentials? Three things — computer, software, printer. That's it.

As far as the computer is concerned, the Amiga you are using now will do fine, even if it is an A500. If you are reading this with a view to buying an Amiga to desktop publish on a budget, the extra money you'll pay for the faster A1200 will serve you well. If you can't stretch that far, go for an A500+ rather than an A600 as there are more add-ons available for the A500+. You will need a minimum of 2Mb of ram. Now don't go thinking that 2Mb is all the memory you need. It is the minimum. That means that the software will run and you'll be able to use it, but at some point you are going to run into the hated "not enough memory" requester. This can easily happen half-way through designing just one page, it depends what you have on that page. And then, even if you've got a complete page designed, printing the thing requires more memory, so you might get a get lost requester then, or, more likely, bits missing from the printed output. The only solution to this problem is to throw memory at it. If you can't afford more memory, then you will have to restrain the creative juices and design less complex pages. To desktop publish multiple-page documents you will need upwards of 4Mb of expansion memory.

WHICH PRINTER?

The general advice is to go for the best one you can afford, but there are certain things you must keep in mind. You must understand that the output from 9-pin and 24-pin colour dot-matrix printers is nothing to be proud of. With a brand new ribbon in the printer you can almost always get three or four quite decent pages, but the ribbons get dirty so quickly that pretty soon all your colours are looking dull and streaky. There is no magic wand that can be waved to cure the problem, you can't buy software or printer drivers or anything else that can make a dirty ribbon print brighter colours; all you can do is buy a new ribbon. At £15-£20 a throw, it can work out damn expensive if you are printing lots of colour documents.

Now, I'm not suggesting that you shouldn't buy a colour dot-matrix printer, I'm simply telling you that you must not expect miracles from them. For miracles you need to spend upwards of £500. It is, however, a different story for mono printers. With a little experience and ingenuity you can do wonders with an inexpensive 9-pin dot-matrix, but for DTP output on a budget you can't beat the little Canon BJ-10 portable bubble jet. Considering it costs just £200, the 360 dpi output is superb. You will always get some slight banding, but then you'll get that from a 9-pin dot matrix as well. To eradicate banding, again you need to spend more money.

Higher output resolution is much

more important than colour. And you don't need a colour printer. If you are doing anything that is going to be mass reproduced, it is going to be cheaper to approach a High Street print shop or a firm of printers, and neither of these will be able to do very much with artwork printed on an expensive inkjet colour printer, let alone a 9-pin dot matrix. Mono artwork can be reproduced quickly, easily and very cheaply. If you want colour, then "spot" colours can be used, and for the print shop or firm of printers to do this they don't need colour artwork, they need mono artwork and a note telling them what colour toner to put in the photocopier or what colour ink to put in the printing press.

Resign yourself to the fact that unless you are willing to spend a few thousand pounds you will not be able to produce anything that even approaches full colour, like the pages of this magazine for example.

JARGON BUSTERS

9-PIN/24-PIN PRINTER: A low quality output device that strikes wire pins onto an inked ribbon in order to make marks on paper.

DPI: Dots per inch

DYE SUBLIMATION: A method of thermal transfer printing that melts coloured wax on to paper to print up to 16.8 million true colours and so produce rich, continuous tone, photographic-quality images.

FULL COLOUR: Material published using the four-colour CMYK printing process.

Mr. Magazine, a unit used for the measurement of memory/storage capacity.

POSTSCRIPT: A page description language that has become the standard for desktop publishing.

REPRO: Short for reproduction

ple. Instead, think about how spot colours can be used to enhance your work. You can also introduce colour into your work by using tints and washes, and again you don't need a colour printer for these. In fact you don't need a printer at all for tints, the firm doing the reproducing should be able to do that for you, all you do is tell them where to put the tint.

But for one-offs and short runs you will probably want to print them at home on your own printer. In which case you must experiment a lot, discover which colours print best and stick to using just those colours. Don't expect to be able to print HAM or 256-colour pictures and get output that looks just like it does on the screen. That's difficult enough to do with high-end colour printers that cost thousands of

PRINTERS/BUREAUS

When buying any printer it is very important to check that there is a suitable Amiga printer driver for it. No good buying an obscure SilverSpeed model for five quid if it won't work with your Amiga.

A good bet if you are after something at the cheaper end of the market is the Citizen Swift 90, a monochrome 9-pin printer for which there is a colour option available. But pin printers, both 9-pin and 24-pin, are more suited for text output than graphics, as they suffer quite badly from banding — regular horizontal lines that stretch across the page. If you want some semblance of quality then start looking at inkjets and bubble jet printers.

For monochrome output you can't go wrong with the Canon BJ-230. It enables you to print on to A3 paper and its output is as good as many lasers. If you need colour, check out the Hewlett-Packard DeskJet 550C or the new Canon BJ-C600. Both of these provide good enough output for rough colour proofs. To get the best from these printers you need to add the cost of a print enhancement package like Studio that comes with suitable drivers.

Ink based printers offer limited options when it comes to resolution, the maximum being 360 dpi with the Canon



pounds. Find out what colours your printer prints best, and then have a good hard think about how you can make the most of what you've got.

Of course the computer and the printer are useless without software. Amiga owners are very fortunate because even the powerful, professional desktop publishing packages are cheap compared to PC and Mac prices. If you don't own a hard drive, *Professional Page* is ruled out, but *PageStream*, which doesn't require a hard drive, can be picked up for under £70 these days. *PageStream* doesn't include a word processor, so a better buy if you are on a real tight budget is *PageSetter*. This software not only comes with a word processor and spelling checker — a special version of the

TransWrite/TransSpell software — but also a simple painting program. Both of these programs are hot-linked to *PageSetter* — so that text and graphics can be moved between the programs without the need for saving and loading. To multi-task like this requires memory and, while it will work with 2Mb, more is recommended.

With an Amiga, a bit of memory, a mono inkjet printer and *PageSetter* — you will have a desktop publishing system that really can be used to produce professional quality work. You can't expect the tools to do the work for you, though. Desktop publishing comprises everything from writing the copy to distributing the finished publication. No matter how much or how little you have spent on hardware and software, none of it is of any use if you don't have the skills, firstly to write and design and secondly to publish and distribute.

Where do you get those skills? Well, some lucky people are born writers or designers, the rest of us have to learn the hard way by doing it wrong enough times until we begin to get it right. You need to practice often. Reading books on the subjects can help. Printing, publishing and distribution is easier to learn about as you will be paying and depending on other people to do this for you. Rather than taking something down a print shop and saying, "Oh, you, print this," go to the print shop first, tell them what you want to produce and ask what would be the cheapest way to produce it without compromising on quality.

I can't hide the fact that desktop publishing on a budget is really hard work because you won't have the equipment that can make everything happen quickly. But the thing about hard work is that the rewards are always greater. Heck, anyone can spend money and do it the easy way, it takes genius to do it for next to nothing. **CU**

NEXT MONTH

Next issue we'll look at the best monitors and scanners that your hard-earned yen can buy, how much memory you need to cruise through the glossiest publication, and find out which word processors are available with what programs.

bubble jets. Laser printers offer higher resolutions, from 300 dpi right up to 1000 dpi or more. Although the natural tendency is that a laser printer is better than an ink-based printer, at 300 dpi there is little difference. So if you want a laser printer, go for a higher resolution one like the Hewlett-Packard LaserJet 4M, which is a 600 dpi device.

To achieve better results than this it may be less expensive to approach repro bureaux, where they will have even higher resolution output devices.

The type of services open to you at bureaux are many and varied. From colour laser copies to high resolution output on film. If you have some colour images from which you would like posters made, you can take them to a bureau as a PostScript file and have them printed on a colour laser printer. The quality from a colour laser printer is not as good as you may think, so if you want something that is closer to photographic quality, ensure about having your document printed on a dye sublimation printer.

Another option when you require photographic quality artwork is to have a bromide created. These are just like photographs but are meant to be used as the artwork from which to print further copies, rather than the final step in the reproduction process. If you have a document that you

requiring a small number of copies — from one to a few hundred — then ask your bureau about the Xerox DocuTech process. The machines that carry out this process are like giant 600 dpi lasers that can output your PostScript files at a higher resolution than a photocopier. And because you don't need to print out any artwork of your own, you can keep costs down.

Other services that bureaux offer are, transferring PostScript files on to slide film, or creating overhead projectors, either in colour or black and white. Then there's the Chromalin — a high quality print taken from colour separations and used as an accurate guide to the final quality of a colour image when reproduced on a printing press. The quality of these is so good that they can be used as contact proofs, whereby you can guarantee to a client that the colours seen in the Chromalin will be exactly the same after reproduction.



For rough colour proofs the HPDeskJet 500C (left) or Canon BJC-600 will do fine. To get better printouts you'll need to use a dye sublimation printer, and may go on to £2000+ systems.

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John Kennedy and Mat Broomfield pit their wits, once more, against some of the hardest technical problems since the invention of Comms packages.

ICON SEE CLEARLY



I haven't had my machine long, but I've learned to use Workbench 3.0 pretty well. But I have a problem if I am designing or altering icons—when I draw the icons everything is fine and in colour. However, when I save them, all the colours disappear and the icon is saved as a black and white mess. Am I doing something wrong or is there a bug in the IconEd program?
Chris Borwick, Stoneygate, Leicester.

An icon can only choose its colours from the existing Workbench 3.0 pen colours. If there are only two Workbench colours, the icon will appear in black and white. This is the first thing you should check and try upping the number of colours to eight or 16 with the Prefs program screen mode.

The Workbench 3.0 IconEd program does have a few quirks when it comes to colour. It turns out most of these can be solved by using the IconEd program which came with Workbench 2—perhaps you know someone with an A600 or A500+ who can let you use their copy.

HARD DRIVE BARGAIN



I have a hard drive from a PCII. Is there anyway in which I can use it with my Amiga 500? I hope there is, please help.
Scott Plumridge, St George, Bristol.

The hard drive from a PC is likely to conform to the IDE standard. Unlike the A1200 or A600, to use it with the A500 will need to buy an IDE interface—try Trilogic on 0274 691115 and see if they can help you.

A word of advice to anyone trying to use PC hard drives: not all IDE drives are completely compatible. Some drives will only boot from cold (that is, not from a CTRL-Amiga-Amiga reset) and some won't boot at all. The problem

HERE THEY ARE FOLKS - THE Q&A TEAM



JOHN KENNEDY
They call him Big John at his local. We just call him every month to tell us about Locale.



MAT BROOMFIELD
Our Mat found out all about drives this month: CDTV drives, IDE drives, whist drives...

is one of speed—sometimes the computer is too fast, sometimes the drive is too fast. Take care to ensure the drive you buy is compatible with your model of Amiga—drives which work on the A600 don't always work with the A1200 and vice versa.

Some drives will hang with long data transfers—one possible solution is to use HDTtoolbox to adjust the maximum speed to a smaller value. Please don't mess around with this program if you don't know what you are doing! Pressing the wrong gadget can erase all the data and an accidental Low Level Format will even destroy the drive permanently.

DRIVE BOTHER



I have recently added a GVP A530 Turbo Hard Drive to my Amiga 500+. To do this I had to disconnect my Amiga A570 CD-ROM drive, as it uses the same connection. Could you please let me know how I can reconnect this with the hard drive in place? I have been told that a Centronics cable would do the trick and if so, where could I purchase one?
Mr. W. Graham, Dunbar, Scotland.

I don't know who told you about the Centronics cable, but they are way off target. A Centronics cable will only connect the parallel port of the Amiga to a parallel printer—Centronics is the name of the parallel data protocol. Perhaps your friend was misled by the similar-looking 25 way connector at the rear of the GVP A530. This is, in fact, a SCSI interface, which will allow you to use other SCSI drives (including CD-ROM drives).

Unfortunately, the Commodore A570 CD-ROM drive isn't a SCSI device. The only interface it does have is the edge connector with which it interfaces with the Amiga 500. What you need is a card which will duplicate this edge connector, and I believe Datel (Tel: 071 580 4460) make such a device. Unfortunately, you will have a tremendously hard time using it, as the second connector is at right angles, pointing upwards. Secondly, there is no guarantee that the CD-ROM drive and the hard drive will work together.

My suggestion is to scour your local paper for the cheapest secondhand A500 you can buy. Then use the *Parrel* linking software (supplied on last month's cover disk) to link the two computers.

WHY OH WHY?



Please, please help me as I'm at my wits end. When I read your review of *The Publisher* I thought "brilliant" until I found out it doesn't work on the A1200. Why? If I use Relokick will it work?

P.M. Baguley, whereabouts unknown.

The Publisher (reviewed in the December 1993 issue of C&A) won't get on with the AGA

chipset present in the A1200 and A4000, which means no matter what Kickstart you use (Relokick will swap from 3.x or 2.x to 1.3) the program will continue to fail. This is a pity as it quite a good program. However, the similarly priced *PageSetter III* by GoldDisk (available from Silica Systems, tel:081 309 1111) will work fine. So get that instead. It's good.

MAGIC WORKBENCH



I've noticed that a lot of screenshots in your magazine seem to use a new Workbench, with different colours and icons. Please can I have a copy?
J. Runner, Bangor, Wales.

Anyone can have a copy—just get the program shareware disk from your favourite PD library called *Magic Workbench*. I notice that 17 Bit Software (Tel:0924 366982) have included it in their collection as number 2785.

AMIGA NATIVE



I'm interested in learning more about the AGA chipset and the new Workbench features, is there a new hardware manual coming out?
Nicholas Barnett, Chelsea, London.

Well, according to Commodore's Sharon McGuffie there should be a new set of Rom Kernel manuals released in the UK by October this year. These manuals should contain all the intuition-friendly coding you'll need, but I would say it is extremely unlikely that there will be a hardware manual containing the same degree of detail that was made available for the A500/A2000 machines.

In the meantime, the Commodore Amiga 3.0 Native Developer Pack is now available. This five disk pack contains a heck of a lot of essential programming details, and any budding A1200 programmer should send a cheque or postal order for £23.50 made out to CBM (UK) Ltd. to: Sharon McGuffie, CBM (UK) Ltd, Commodore House, The Switchback, Gardner Road, Maldenhead, Berks SL6 7XA. Please write your cheque number on the back of any cheques. Please note that this set won't teach you to program, nor does it contain any programming languages. Instead it is full of example code (mostly C) and includes the famous "INCLUDES" that are needed to access the operating system.

If you really, really want to know some AGA hardware details, get the latest *AmigaGuide* version of Comrade J's *How to Code* document from a good PD library or BBS. Writing programs which directly use the hardware will mean your programs will only work on the current AGA machines. A lot of people get upset about this, and call you silly names if you ask about it on the CIX BBS. Mind you, when asked how to duplicate an effect originally achieved

by hardware-hitting using the OS, they went strangely quiet and said they would get back to me. That was six months ago.

PERPLEXED AND CONFUSED

For a while now I have been thinking about upgrading my 1.3 Workbench to 2.0. I own an A500 with 1Mb of RAM, but I am unsure of some things:

1. How much will the upgrade be?
2. Will it affect any of my games/programs?
3. Call me stupid, but how much memory will I have without my 0.5 Mb upgrade?
4. Will I need to take my Amiga to the shop to get it fitted?

James Edwards, Barnt Green, Worcestershire.

Wow, I would have thought this letter was a year late if it arrived last year. If you can possibly afford to buy an A1200, do it tomorrow – it will save you a lot of hassle. I really don't know how you can continue to use the horrible orange and blue of Workbench 1.3.

Falling all that, here are some answers:

1. Looking in the current Silica Systems catalogue, the ROM switching hardware is £10, and the new (ish) ROM is about £20.

2. No, because you can switch back to the old ROM at the first hint of any problems. Only very old programs should fail.

3. 1Mb of RAM minus 0.5Mb of RAM leaves 0.5Mb. Why do you want to remove the memory? Workbench 2.0 will use it just as well as Workbench 1.3.

4. No, you can fit the ROM switcher yourself.

As I said, please get an A1200 instead. If you can't, you can be sure that there will be a lot of secondhand A500 hardware around as users upgrade. Put a wanted advertisement in your local paper.

PC CD-ROM PDQ

I own an A570 CDTV add-on and a 1Mb Amiga 500 with Workbench 1.3. When I bought it the box said it was compatible with ISO9660. I read somewhere that this means it can run PC CD-ROM software. If this is true could you please tell me what PC disk software I can run. Would an AT-ONCE PC emulator allow me to run them?

I know the CDTV is not compatible with CD32 programs, but can it run Apple Mac CDs? Finally, do you know of any CDTV based clubs or magazines so I can find out more?

Richard Johnson, Tywardreath, Cornwall.

Yes, the CDTV drive is compatible with ISO9660 – the usual standard for CD-ROMS. However, all this means is that the data can be accessed – it doesn't mean the data can be understood. For example, if a PC CD-ROM contains text then this can be loaded, but if the disk contains a program to display the text, this program cannot be run.

Adding an emulator such as the AT-ONCE would certainly allow some PC programs stored on a CD to run, but I'm not sure if the CDTV drive and the emulator would work well together. Besides, the emulator isn't really up to running games – only "serious" text-based programs.

The Apple Mac's file system is rather weird, and uses two files (data and resource forks) where the Amiga uses one. This can cause

problems for AmigaDOS, although apparently it is possible to use a new CD-ROM File System on the Amiga to read Apple Mac disks. Again, data can be accessed, but the programs cannot be directly executed.

I wish I did know of some CDTV clubs – I have a CDTV, which is solely used for parnetting PD software into my A4000.

PC, A1200 OR CD32?



I wonder if you could help me with a problem. I am torn between getting an A1200 or a CD32. I am not a programmer, and I doubt if I ever will be, but I want a powerful machine to play games on. What I really want to know is are PC games easy to convert to the CD32, and if so, are there likely to be any games converted from PC to CD32, such as the brilliant X-Wing?

I know that they are working on a CD version of Frontier, which will be like the PC version, but the software that comes free with the CD32 (so I've heard) is rubbish.

Please tell me which machine is better for the gamer who wants PC quality games but can't afford a PC! Steve Owell, Alton, Hants.

So, you're a frustrated PC gamer are you? If you want a PC that badly you should start looking around for secondhand 386 machines. It shouldn't cost considerably more than a CD32 or A1200.

But, if you want state-of-the-art hardware (and here I mean a computer designed after the 1970s), you should stick with Commodore. I reckon a CD32 is what you want. The CD-ROM means bigger and better games, and if it catches on like it should, there will soon be peripherals to add to all the A1200 features necessary for a complete home computer.

The CD32 has a CPU of the same family as the other Amiga's – a Motorola 68020. This is as far from a PC's Intel brain as you can get, so converting games isn't easy. Besides, in order to take advantage of the more advanced Amiga graphics and sound, the game will need to be re-written anyway.

The AKIKO chip is rather misleading: it provides a reasonably quick way of providing a special "chunky" way of writing pixels in the same way the PC does. It will make certain tasks, such as texture mapping, quicker but it won't make porting PC games any simpler.

The software that comes with the CD32 isn't gob-smackingly brilliant, but it is far from rubbish. Within six months there should be a few games that will give X-Wing a run for its money.

PARNET PROBLEMS



Does leaving an A1200 on overnight do any harm? Also, how can I get Parnet to work? I have linked my son's A1200 to my A4000/030 but it just won't work, please help me.

Mr. R.J. Blount, Minehead, Somerset.

Leaving the A1200 on overnight is a matter of personal taste. Some people don't even like leaving their video recorders on (which is why they always have 0000 flashing on them all the time). Certainly the risk of fire is present, although it is a very small one. If you are nervous, ask a qualified electrician to inspect your wiring. The best thing you can do is fit a Smoke Detector/Fire Alarm in the same room!

I frequently leave my computers on for days at a time, and once I even left it on whilst I went on holiday, although in retrospect this probably wasn't a wise move: last week my monitor caught fire as I was watching it. I would say that the solid state workings of an Amiga are incredibly unlikely to catch fire as there are only low voltages and currents present, unlike a TV or monitor where 26,000 volt sparks can shoot out the back and scare you wild. I'd say leaving the computer on overnight is fine, but always switch off the monitor at the mains. But don't hold me responsible!

Parnet is a notoriously tricky program to use. It took me weeks before I realised I had the cable made incorrectly. I would wager that most problems are due to the cable not being connected properly or just plain wired wrong.

When you do get the wiring right, the next thing is to start the server and client programs – this can be done in the user-startup file.

Now, make sure the NET: device is mounted: open a shell and enter mount net: (return).

Before any device can be accessed, it is necessary to inform the system it exists. This can most easily be done by CD'ing to it. For example, to access the floppy disk on the remote machine, enter cd NET:d0 (return) at the shell.

To access the hard drive enter cd NET:h0 (return). You might want to create assigns to make access simpler: assign d2: net:d0 (return) will create a new device (d2:) which can be used like d0:

For more help on Parnet, get 17 Bit Software (Tel: 0924 368 982) to send you disk 2783, which is crammed of pictures and text. You'll have to pay them first, by the way.

Incidentally, if you are having problems with Parnet appearing to hang after long file transfers, you should look out ParNFS, and alternative set of routines which use the same Parnet device drivers. Although it introduces its own quirks, ParNFS is faster and more reliable. The only snag is that it is WBS2 only, but it can be coaxed to work on the CDTV.

ROM IT HOME



I have recently bought an A1200 with an 85Mb Hard drive. I'm very interested in the CD32. Could you please tell me when the CD-ROM drive for the A1200 will be released, how much it will cost and (my last question), will it fit into the PCMCIA card slot? Kriss Goodall, France.

No, I'm afraid I can't tell you, as that information has yet to be made public. What I can give you though is the best guesses I can make from what little facts are floating around.

First of all, don't hold your breath waiting. The Big C have said that they have the CD-ROM drive almost finished, but the big problem is cost – it will cost almost as much as a standard CD32.

The CD32 is really a miracle in the exercise of value for money and cost control. As the A1200 was designed well before the CD32, in my opinion it is unrealistic to expect an easy (and cheap) upgrade path.

Secondly, the CD-ROM drive will only fit to the trapdoor expansion. This leaves a problem as to where any user-installed extra memory or faster processors will go: at the moment it looks like the back of the case.

The really bad news is that currently there

appears to be no way to fit the FMV cartridge (the MPEG chips that allow real video footage to be shown from CD) to the A1200. It's all pretty messy really – perhaps by this time next year we'll look back and laugh at all the fuss we were making. Nah, we won't.

PLAY BY MAIL

I wish to purchase software that would enable me to run a "play by mail" football game (i.e. when the players of the game send their moves in via the post), but am having great difficulty locating any. Is there a company that could provide me with some?

Mark Clinton, Werley, West Midlands.

Sure there is: it's called *AMOS* or *Blitz Basic*, and the only snag is that you have to write it yourself. If you can't manage it, I'm sure some budding programming genius would be only too happy to volunteer their services.

Failing all that, I'm stuck. Perhaps if a software house is in fact publishing such a program they would let us all know.

ATARI RULES OKAY?

I've recently changed over from the Atari ST to the A1200, so I'm feeling a little bit at sea. My problems begin when I try to copy programs from one disk to another (especially cover disks). I'm never sure which files need to be transferred or where to find them (not a problem on the ST). Have you any general tips on how to set about copying programs from one place to another, and installing them onto hard disk?

Peter Bardon, Bradford, West Yorkshire.

Copying programs is slightly trickier on the Amiga than on the ST because the Amiga has a proper operating system. The multi-tasking nature of the Workbench requires that a special re-entrant code is stored in particular places. This code, called libraries and devices, can be used by many programs at the same time. The operating system then arbitrates between the programs, making sure each gets its fair share of processor time, memory and any extras such as the printer, or serial port.

These code modules always live in the same place. The general purpose libraries stay in a drawer called LIBS; and to look at them all you need to do is open a Shell window and type DIR LIBS: (return). Similarly, devices (such as the printer device) live in the DEVS: drawer. The AmigaDOS commands (such as LIST, DIR and so on) live in the C: directory.

Probably the first problem beginners meet is the fact that LIBS:, DEVS: and the rest can move around. The disk that an Amiga first boots from (either floppy or hard) is assumed to contain LIBS:, DEVS: and so on. Thus, if a computer boots from a hard disk then a cover disk program may no longer run because when it looks in LIBS: for a particular library, it can't find it. Instead of looking on the floppy, it's looking on the hard disk.

The solution is to copy the libraries and devices to the hard disk. Let's assume your program won't run because it needs the *explode.library* (this happens all the time when virus checking programs are copied). Boot from your normal disk (hard or floppy), open a Shell and then insert the floppy disk that contains the offending program. Enter "copy

dfo:lib:explode.library to LIBS:" and all should be well. Try entering "resident c:copy" first if you get into a disk swapping frenzy.

MIDI MAYHEM

I recently purchased a Roland JV30 General MIDI synth, and I would like to sequence it using my Amiga. I own a bog standard A600 and I was considering buying a 4Mb PCMCIA card, a MIDI interface and Bars and Pipes 2.

Would Bars and Pipes 2 be able to utilise PCMCIA memory? And would this set-up work at a reasonable speed when processing information and performing tasks such as quantisation and putting my recordings on-screen in traditional stave notation format?

I would be most grateful if you could answer my questions and I could demonstrate my appreciation by mentioning you in my first album!

J. Riley, Woolton, Liverpool.

Hmm, a JV30, lucky you. Any program will utilise extra memory, all that sort of thing is handled automatically by the operating system. It's only games and demos which ignore intuition and the OS that refuse to acknowledge memory above the standard 1Mb. However, you might find it a better idea to fill the trapdoor memory slot before buying an expensive 4Mb card.

Bars and Pipes 2 is a processor-intensive program, but that doesn't mean you won't be able to use it. The beauty of *Bars and Pipes 2* means that a lot of processing, quantisation, etc., needs to be only done once. You should be able to construct some very advanced pieces before speed becomes a problem.

Unfortunately, *Bars and Pipes 2* won't display your songs in traditional notation. The closest it will manage is a sort of blob and grid display. If this is important to you, consider buying the *Deluxe Music Construction Set 2*.

MONITORING THE SITUATION

I own an A1200 and I'm wondering which monitor to get: the Commodore or VAG2 or the Microvitec 1440 Multiscan? I need VGA and VGA compatibility with a flicker free display in all modes.

What is the difference between Multi and Dual sync monitors? Which would be better for video games? I've been searching for five months and have about £450 to spend.

Hrant Julie Bedoyan, Amman, Jordan.

Last things first: Multi and Dual sync displays. The new Amiga range (the A1200 and A4000) are the first Amigas to have a programmable video output (okay, to be picky the ECS chipset in the A500+ was, but only just). This means the video signal can exist at different horizontal and vertical frequencies.

Standard PAL works at 15.72kHz horizontally, and 50Hz vertically, whereas a DoublePAL screen (the flicker free display) works at 27.50kHz horizontally and 48Hz vertically. This is fairly close to the PC standard VGA, which wants 31.5kHz. Most, but not all, PC monitors will display DoublePAL mode. Some need the extra VGAOnly program to be placed in the Workbench drawer to slightly alter the scan rates. These monitors will not work with the 15kHz signal which all games use. The

15kHz was chosen to permit usage with domestic television sets.

The standard 1064 Commodore/Philips monitor only works at 15.72kHz, and will therefore not support DoublePAL mode: it will flicker.

The 1942, and 1940, are dual sync monitors, which means they will work at 15.72kHz as before and also at 27.50kHz for a flicker-free DoublePAL display.

These monitors should also display Euro72 mode, which is a 29.32kHz/65Hz display. As it works at 65Hz it is updated more regularly than a DoublePAL or PAL, and is a bit easier on the eyes.

The Microvitec is a multiscan monitor (like the old Commodore 1960), in that it will try its best to work with all video signals, irrespective of frequency.

From an Amiga owner's point of view, this means one more screen mode: Super72 (23.21kHz/71Hz) which gives a rock steady display, but too small to be useful.

Anyway, the point is that a 1942 is a perfectly good monitor, with a high resolution display and the bonus of stereo speakers. The Microvitec is a true multiscan, and should work with anything (although rumours of some software incompatibilities are starting to surface).

I would recommend you get a 1942, which will give you a good picture for games, good sound and also a flicker free display.

Incidentally, in order of preference, here are my favourite screen modes (i.e. less likely to give me a headache after staring at the screen all day). Try them in order until your monitor can't cope: PAL, Euro36, DbPAL, Euro72 and Multiscan.

APPLE TURNOVER

I am looking for a program, like *CrossDOS*, that will allow me to transfer normal text files between Amiga and Macintosh formatted disks. It is very important that I can find such a program so I can continue work at college and at home. If there are any programs that are on the PD circuit, shareware or even commercial, can you please let me know the title, the price and the name of the company concerned.

Ryan Morse, Milton Keynes.

You already have all the programs you need: *CrossDOS*. Using this program (which all new A1200s and A4000s are supplied with as standard, by the way) the Amiga can read and write to PC format disks. You can also format disks PC style from the CLI, by typing "format drive pc:n PCDISK" (return).

All Apple Mac computers come with a program called Apple File Exchange, which is a utility which will read and write PC disks. Problem solved!

If you want to read or write Macintosh format disks directly, you'll need to invest in a little extra hardware, namely an Emulated Mac emulator and a suitable floppy disk drive. I guess that as you're at college this will probably be outside your price range...

NEXT MONTH

There will be plenty more Q&A next month, so write with your queries to: Matt and John, CU AMIGA, Priory Court, 30-32 Farringdon Lane, London, EC1R 3AU.

THE GREAT CALIGARI COMPETITION

Thanks to the Caligari Corporation and Meridian Distribution you can win one of ten copies of *Caligari 24*, the superb 3D design and animation program from America. The program normally costs £99.99 and it's ideal for designing and rendering complex real world scenes in three dimensions. However, because of the way that the program works, it can render your pictures many times faster than the nicest rival products.

So what do you have to do in order to be in with a chance of winning one of these copies of *Caligari 24*? Simply answer the following multiple choice questions, and write your answers on the back of a postcard, along with your name and address. Then send the postcard to:

Caligari Is Super Competition, CU AMIGA, Priory Court, 30-32 Farringdon Lane, London, EC1R 3AU. The first ten correct entries out of the hat by April 1st, 1994, win the goodies.

You can use Caligari to render stunning photorealistic images such as this incredible Lily.

Copyright (C) 1992, Steve Menzies

RULES GLORIOUS RULES

1. This competition is not open to any employees of EMM Images, Caligari Corporation or Meridian Distribution.
2. Closing date for all entries is April 4, 1994.
3. All entries, written on a postcard drawn by CU AMIGA, Priory Court, 30-32 Farringdon Lane, London, EC1R 3AU.
4. The editor's decision is final.

THE QUESTIONS

Be very careful, there's a couple of tricky ones in there!

1. Is Caligari a ray tracing package? Y/N ☐
2. How many bits of fantastic colour can the Caligari use?
a. 16 ☐
b. 24 ☐
c. 32 ☐
3. Meridian means
a. A line running through the North and South Poles ☐
b. The Highest point ☐
c. A weight equivalent to 1000 kilograms ☐
4. Tony Horgan recently went on holiday to
a. Bali and Peking ☐
b. Peru and Australia ☐
c. Fiji and New Zealand ☐
(Hint: think bungee jumping...)

If you are not fortunate enough to win one of these stunning prizes you can still buy a copy directly from Meridian Distribution.

Contact them by ringing 081 543 3500.



you too could create pics like this lot with Caligari

BACKCHAT

We all know there are times when you just have to be heard, when you are screaming inside, when you feel like no one truly knows how you feel. If you need to talk, Tony Dillon is a fairly desperate measure.

A LITTLE DEFENCE

I am writing to express my shock when reading the January issue of my favourite magazine (CU AMIGA of course). Almost every letter that I read was to complain about the magazine. All I can say is that these people obviously had temporary brain displacements while writing their letters.

Having said this I am rather jealous of my friend who has subscribed to a rival magazine as I would very much like to subscribe to CU AMIGA, but there doesn't seem to be a page with any details of how to do this. Also, I have only been reading CU AMIGA since May, so I would like to purchase some back issues, but there isn't a page on back issues either.

I don't want you to think that I am complaining because I think that CU AMIGA is the best magazine around and I will continue to buy it as long as I have an Amiga.

Mark Clifft, Wednesday.

You want a subscription? You can subscribe! All right, so we don't crow about it like other magazines, but our subscription details are there on the contents pages for all to see (just below the back issues bit!). We have plans for an enormous promotion to go with subscriptions soon, although these have yet to be finalised. Watch this space.

SCOTCH MIST

Last year I bought an A1200 but after nine months, I fogged it due to the lack of the promised software. Anyway, now that the software houses have got their Dundee cakes together I'm thinking of purchasing a new machine. The problem is that both the 1200 and CD32 seem very limited due to the limitations of the trapdoor expansion slot: i.e. you have to choose between a CD Drive costing almost the same as a CD32 or an accelerator? I feel this is a serious mess up by big C - especially for non-loaded dourgnuts like me.

The biggest faux-pas, however is Commodore's lack of support to their accompaign. Try as I might I couldn't find an outlet

flogging CD32s in either Perth or Dundee. Now call me finicky but when you have a £7 million ad campaign, it seems sensible to make the product you're flogging available. I never saw one in any of the large electrical outlets or more disturbing, any of the special computer shops including the software house owned by DMA.

I finally tracked down a CD32 in the local Clydesdale branch here in Arbroath. Commodore may be good at making computers, but they're no good at marketing. I'd get rid of these so-called marketing gurus. At least it would reduce any unnecessary overheads.

On another subject I am very interested in DTP and would love to be able to produce fanzines, but how do I go about it? I think it would be interesting if you were to run an article on the production of mags and fanzines, even about how you produce CU AMIGA.

THE FAR SIDE

By GARY LARSON



*Young urban scientist

Last month, you said in Backchat that the screenshots of *inferno* which were PC shots are identical to that to be seen on the Amiga. However I read in a PC mag that DID will be using less than the 256 colours available for the Amiga version in order to keep the speed up. Who is right?

Also 'worried mother' seems to be one of these typical politically-correct animal cakes. Maybe she should realise that CU AMIGA is a predominantly guys mag, not totally but more guys buy it and hey, guys enjoy these types of things. Besides, can't she get it into her head that it's just a bit of fun and if anyone doesn't like it, they don't need to buy it. Simple really. Ian McEwan, Arbroath.

It's one thing to criticise, but it's another to constructively criticise. If you really think Commodore's marketing this Christmas was a little off, then what would you do to improve it? Anyone? Answers on a postcard to the usual address.

Your luck is in this month, Ian, because on page 162-163 there is the first part of a tutorial aimed specifically at Desktop publishing on the Amiga.

On the subject of the *inferno* screenshots, at the time of writing the review, the aim was to make the game look exactly the same on the Amiga.

CD GRUMBLES

How come if I want to buy floppy disk based software then CU AMIGA gives me a complete breakdown of the product down to what machines it will run on. However, change the format to CD ROM and this sensible approach goes out of the window.

For example, in the January issue the Insight Technology CD was reviewed in the CD32 Zone as a CD32-only product. This is not true as it will run from a CDTV (through Workbench) and I don't doubt it will run from the A570 as well.

I expect the best from CU AMIGA and in this respect you are not delivering it. Why not change the name of CD32 Zone to CD ROM Zone. You're going to have a name change soon with the release of a CD drive for the A1200 anyway. Philip Bowden, Middlessex.

CD32 Zone contains news for the CD32 and other related Amiga CD markets. So we don't have to change the name, and going by the news that there probably won't be a CD drive for the 1200 (at least, not from Commodore), we probably never will.

TEAM TALK

'No no, you can't possibly!', cries Lisa. A Team Talk without Dan? Can it be done? Does anyone remember life before him? CU AMIGA shares their favourite childhood memories with you, our lovely readers.

LISA COLLINS



Who would think it, but the object of John Kennedy's desire was a real tear-away as a child, almost expelled four or five times. At one point she was responsible for smothering the front tooth of a boy or behind her in dress, and worst of all she used to torture her dolls, smothering them across the face with a ruler until their cheeks cracked. Presumably they had missed their deadlines.

TONY DILLON



Before he degenerated into the hair bear he is now, Tony was a bit of a leader at school. Disregard by school masters and teachers often, his biggest claim to fame was the fact that, upon entering the Juniors in Primary School, he was doing more advanced maths than the kids in the top class leaving for Secondary School. Needless to say, he was beaten up on a regular basis.

IN VIEW OF THE AMIGA

I'm writing to you to ask about the Amiga market. How is the Amiga really seen by the industry? A dying machine or a growing one? I'm a bit worried, that's all. I really can't believe that PC owners are in a position where they can even try to put down Amigas.

On the Teletext magazine (Digitiser) today, a result of a survey in the industry shows that Amigas only account for 10% of the companies' software sales, 16 out of the 18 people quizzed thought the Amiga would be dead by 1995. Only two people thought CD32 would make it – apparently some think that Commodore is heading for bankruptcy. What I want to know is (according to you) CD32 is heading for sales of 400,000 by the end of January, why the lack of confidence in the product? Half the companies said they were producing for PC CD and Mega CD yet there was no mention of CD32. And why is everyone investing in 300 and at the same time complaining that it's too expensive?

Please tell me how many units the CD32 has sold in the UK. Are these good sales and will they make the industry seriously take note – companies like Virgin who said they wanted to see how it was marketed and how much it would sell. How much does it need to sell to save Commodore and the Amiga, and to get proper software investment?

Another thing, when will Commodore tell the world about the power of the Amiga as a "serious" machine? There's no point having the best OS and software like Final Writer and Wordworth 3 if non-Amiga owners don't know about them.

Charly, Amigadom.

The Amiga is a machine that is not only surviving, but thriving! Just look at the sales for last Christmas. Console sales seemed to be plummeting whilst, Amiga sales were up! The industry still supports the Amiga, and will continue to do so. As for Commodore telling the world about the serious power of the Amiga, they don't really have to when there are programs like *Scale* and hardware like the Video Toaster ruling the world. I don't have the official figures yet for how many CD32s have been sold – but rumours have it that over 70,000 have been sold already.

SENSIBLE THOUGHTS

I have read with interest over the continuing debates about software piracy. You have those for it, complaining about the price of software and those against saying that piracy is the cause of high prices.

This got me to thinking about another industry that is plagued by piracy... the music industry. The average price for a cassette tape is £8.50, for a CD £13.50 but for a piece of gaming software £25-£30! If music cassettes could offer £1 to record and package etc, a CD we are told about £2, a computer disk... my own personal estimate is about 75p – that's for one disk and its recording costs, packaging etc. So why does a disk cost 30 times

LETTER OF THE MONTH

HONESTY IS BEST

I was astonished to read Tony Dillon's excessively negative review of Digital Integration's Tornado flight simulator in the December issue of CU AMIGA. His claim that: "On an A1200, with most of the detail off, you are taking a frame every two seconds" seemed particularly preposterous.

I immediately phoned Digital Integration about the review, asking: "Surely this cannot be true?" I was relieved to hear from their PR Lady that of course it wasn't true. Tony Dillon had seen an early pre-release version which was nothing like the finished product, and on a 1200 of course it was smooth and fast, etc.

Well, when this flight sim eventually did hit the shelves, I almost bought it (in all senses of the phrase).

Fortunately two things stopped me. The awful memory of Tony Dillon's review and the fact that on the side of the box was a label stating "Accelerator card recommended."

I asked for a demo. What a shock! With all the detail at low setting on a 1200 it was impossible to fly. The frame rate was actually about two frames per second, which is of course ludicrous for a flight simulator.

Thanks for your honest review, Tony. I'm sorry I doubted you. Guess it's back to Vietnam in my Intruder until somebody can come up with a decent new flight simulator. Mike Eustace, Leeds.

There you go Mike. How dare you doubt my word. CU AMIGA will never review a game that isn't in a reviewable state. Pre-release stuff doesn't automatically mean unfinished. Why would Digital Integration bother to show us something that ran as slowly as *Tornado* does if it was going to be much faster and smoother when released?

more than its initial value and tapes and CDs only eight and seven times more respectively?

You might argue that a lot of time, manpower and effort goes into producing a piece of software, but is this not also true for a piece of music? You might argue that software does not have as large a user base as music, but then again there are some musicians that are not very well known, but their product costs the same, or in some cases LESS than popular musicians such as Michael Jackson or U2 etc. I mean, how many fans has Mr. Blobby got?

Users:	PC	Millions upon millions.
	Consoles:	Millions
	Amigas:	A few million
	STs:	3 dozen
	Mr Blobby:	A few thousand.
Cost:	PCs	£400s
	Consoles:	£45
	Amiga/ST:	£25
	Mr. Blobby:	Less than £3.

TONY HORGAN



Tony's musical span-to-be career extends way back into his rhythmic past, with the imp-like spooky haired demon taking over the school disco with his 'Just Like the Real World' Big Petrie record player and a collection of Abba, Sparks and Bonny M disco hits. Also, he remembers the glow of pride when wearing his first tank top, and a pair of belching tartan trousers.

You might say that to get quality you must pay the price, and Mr. Blobby's song is only worth £3, but remember the best song in the world still only sells for £3! It also seems to me that the bigger the user base, the more expensive the product! Does this seem right to you?

Don't get me wrong I am in no way condoning piracy! All I am saying is that the software houses do not have any argument as far as overpricing goes. Computer software is overpriced! Until it falls to a realistic level, piracy is here to stay! Philip Clague, Wirral.

Remember a song released in the charts makes money from the single sale, from sales of the album, live performances, cassette sales, CD sales, vinyl sales and merchandising. An Amiga game makes its money purely on the sales of the disk. Also, don't be too quick to assume that every single released makes money. True, a track by Michael Jackson will make a fortune, but a track by Talain's Hardcore Sensation won't. If anything, they'll probably run to a loss. Unfortunately, if the PC world is anything to go by, games are going to become more expensive as time goes on. It takes a lot of work to fill a CD, and this is something we're all going to have to pay for.

FRONTIER PHYSICS

I am writing to your fine and excellent magazine with reference to Stuart Murcock's letter in January's CU AMIGA concerning Frontier. Since its release there has been a small amount of whingers who rip the game to shreds without seeing the depth and the accuracy of detail on a subject which is still a subject of unknown territory.

I do admit my rating was a little lavish (97%), the game is still a milestone in computer programming. You cleared up the autopilot and docking computer problem but you didn't clear up the problem of acceleration and deceleration. On how glad I am to finally explain this bit of information. Here goes... On Earth we are fortunate to have gravity. This means that if you throw a ball up into the air (disregarding mass' area) the force acting against the gravity would propel the ball upwards until the force in the ball is equal to gravity, whereupon the ball would start to fall to Earth and gather speed.

In space, however, there is no gravity, so there is no force acting against a solid object. If you move an object at 10mph, the object would continue at 10 mph (a) it comes into contact with a solid object or (b) an opposing force of 10 mph is applied, whereupon the solid would come to a halt.

All this is explained in a far more complex theory in Appendix II of the manual. I can't help but feel the standard of education has declined. David Braben should be congratulated on the accuracy of his game.

Robert Barlow, Hull.

Well, I'm glad that cleared up that final mess. Mind you, now there's a load of smashed apples all over the carpet, and who is going to clean that up? Eh?

JOHN KENNEDY



John may look like a pleasant happy fellow who shamelessly endorses a particular brand of stout, but in reality he too was a solidist child, which explains the connection with Lisa. John's fond childhood experience was watching a friend go out skateboarding, and then fall face first into some dew. His favourite part of the whole experience was watching him spit it out.

MAT BROOMFIELD



Mat's a mellow kind of guy, and the reasons behind this become completely evident when he sits back and tells you that his favourite childhood memory was that of his dad digging him out of bed in the morning to kiss him goodbye before he went off to work. I'm sorry, I can't be sarcastic about this one. It's just making me go all teary eyed.

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Okay, so the
CD32 has been
around for a lit-
tle while now,
but Mat
Broomfield



thinks it's time to think
about the future.

As far as Commodore's concerned, the CD32 ought to come with wings and a halo! Why? Well, if the word on the street was to be believed, Commodore were at a make or break stage in the latter half of last year, and CD32 was the product that held their future in the balance. Amidst a well-choreographed whirl of PR hype, the CD32 was launched to a generally good reception. It sold well, despite the non-appearance of more than half of the promised software titles. This came as no surprise; I don't think there's ever been a computer launched that actually received the software at the promised release time.

One thing that did materialise, however, was the FMV cartridge which enables the CD32 to play video CDs. This is seen by many as an integral feature of CD32's future success, for it gives the machine appeal to a wider audience — i.e. not just gamers.

It's ironic then, that most people think that the CD32 was designed as a rival to the consoles; doubly ironic when you consider the fact that both Sega and Nintendo reported a disastrous period of Christmas sales despite massive price cuts. So, is the CD32 the proud herald of a new generation of machines?

I think that it is. Thanks to new machines like Jaguar, CD32 and 3DO, people have had their sights raised to a new level of performance. However, although the Jaguar only costs about £200, there aren't any games available for it, and even when they appear, they're probably going to be on cartridges costing £50 upwards. As for 3DO, its \$700 price tag all but condemns it to death before it even hits the streets. Sure it'll sell, but it'll never be a mass-market machine. As for Philips CD-I, which is not too expensive — well, how many great CD-I games can you mention?

So what does all this add up to? Simple, hundreds of millions of pounds, dollars and yen spent on raising people's awareness of the new technology, and only CD32 and the A1200 in a position to capitalise on it! And why? Because CD32 is a) Here now; b) Cheap; c) Has cheap software and d) Has expansion potential.

Commodore have also rather shrewdly targeted the machine at gamers and underplayed the machine's further expansion capabilities. However, since Christmas, it seems that they're now gearing up to add another prong to their assault, this one aimed squarely between Philips' eyes — FMV (Full Motion Video). FMV is now with distributors across the country, and whilst at the time of writing, it's not actually shipping, there seems to be little doubt that it will be available in shops by the time you read this.


Initially, the FMV will offer nothing more than the facility to play Video CDs, a prospect which I don't find that thrilling, although I realise that it could raise the standards of video recordings. I can also appreciate the fact that you now get an opportunity to go and make a cup of tea whilst the other half changes the CD half way through

CD32 - WHERE TO NOW?

the film (at present each CD can only hold 72 minutes of video).

Far more interesting however, are the possibilities that this medium opens up at last for true multi-media software, where full-screen, Dolby stereo video footage will become an integral part of the program. So considering the fact that CD32 is at this moment, the most advanced CD-based machine anywhere in the world on a power-to-price basis, why does its appearance belittle its capabilities? HG Wells and the makers of *Lost in Space* might have thought that a plastic-coated future where everything was streamlined seemed

like a good idea, but the reality of the situation is that the CD32 just looks tacky and cheap, like a young child's toy.

This is a real tragedy because, if it were designed to fit in with most people's component hi-fi systems, it would be far more appealing to the general public, and they'd be likely to take it more seriously as an addition to their home entertainment systems. Anyway, that glitch aside, it really does look as if Commodore have got it together, with the UK division proudly leading the way forward (in all its plastic glory!). Well done guys, we're all watching... 



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